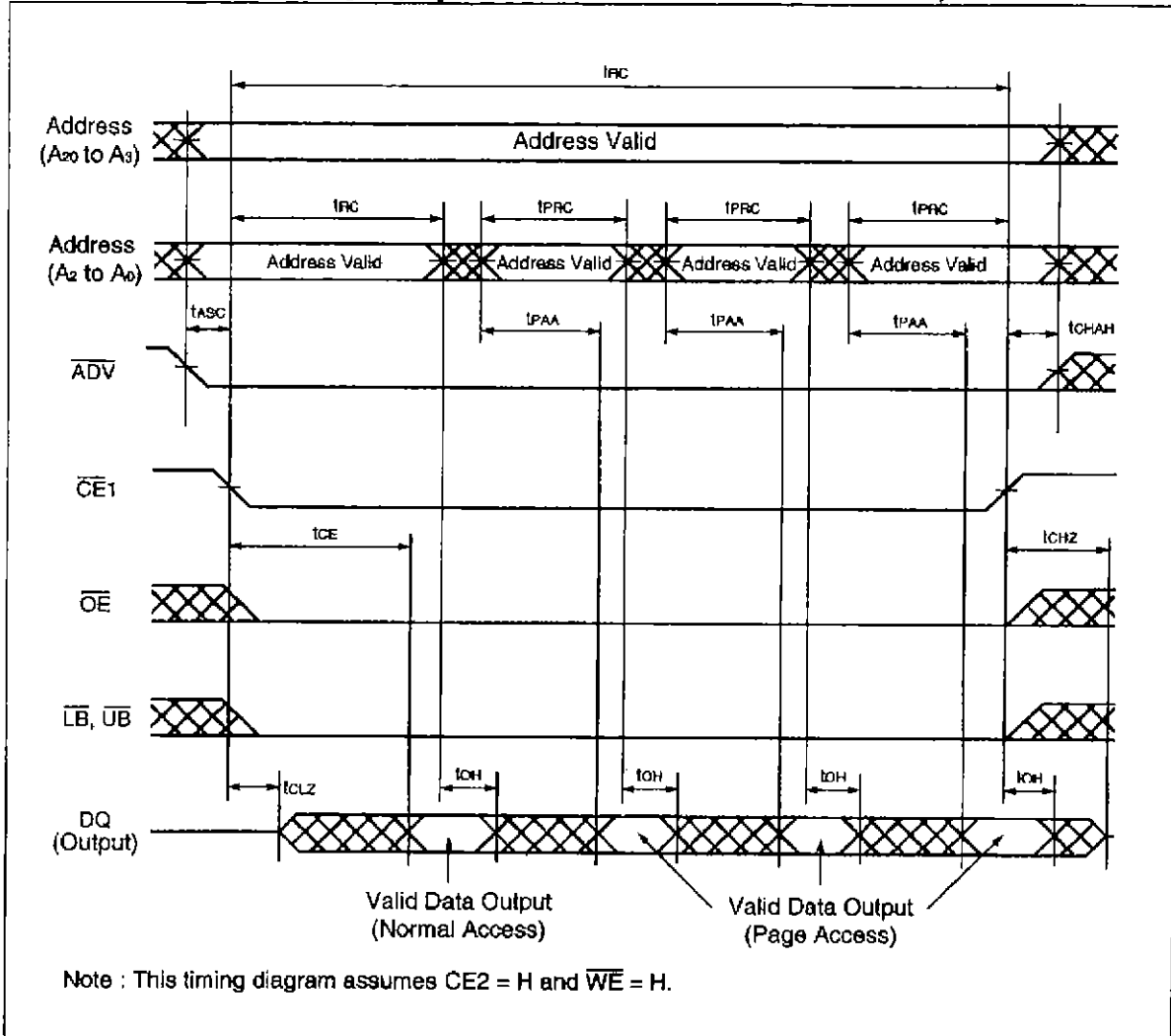


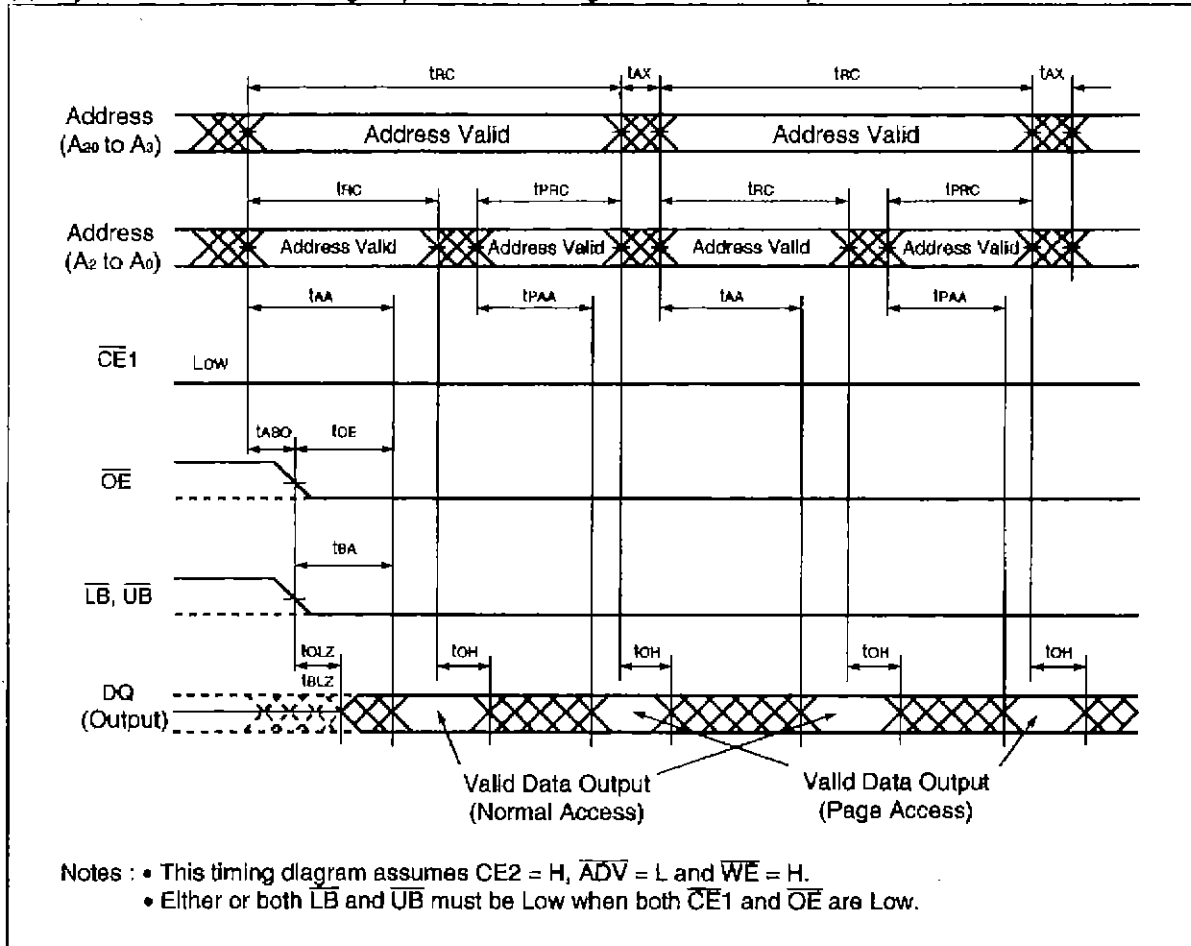
# MB82DBS02163C-70L

(5) Asynchronous Read Timing #4 (Page Address Access after  $\overline{CE1}$  Control Access)



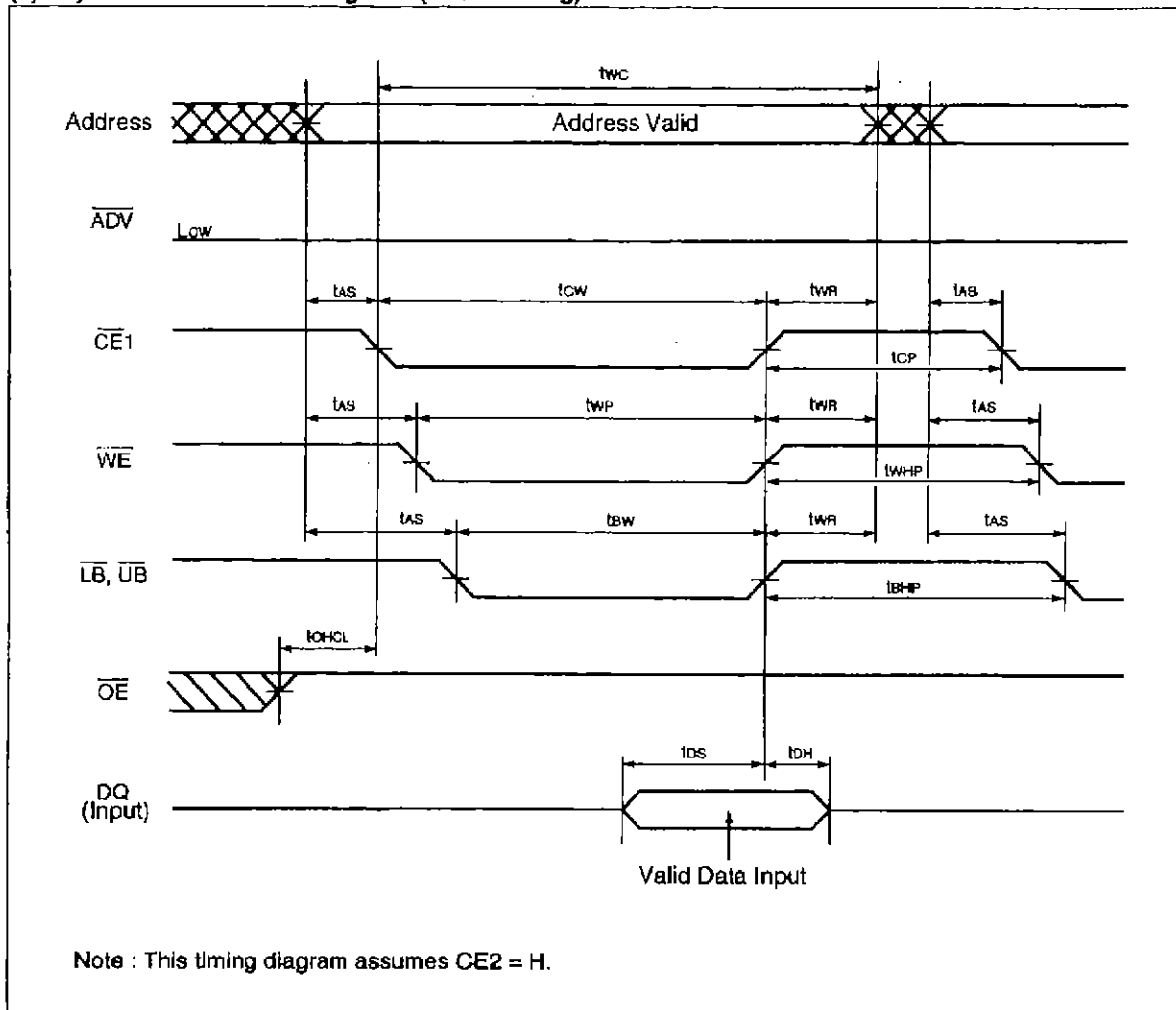
# MB82DBS02163C-70L

## (6) Asynchronous Read Timing #5 (Random and Page Address Access)



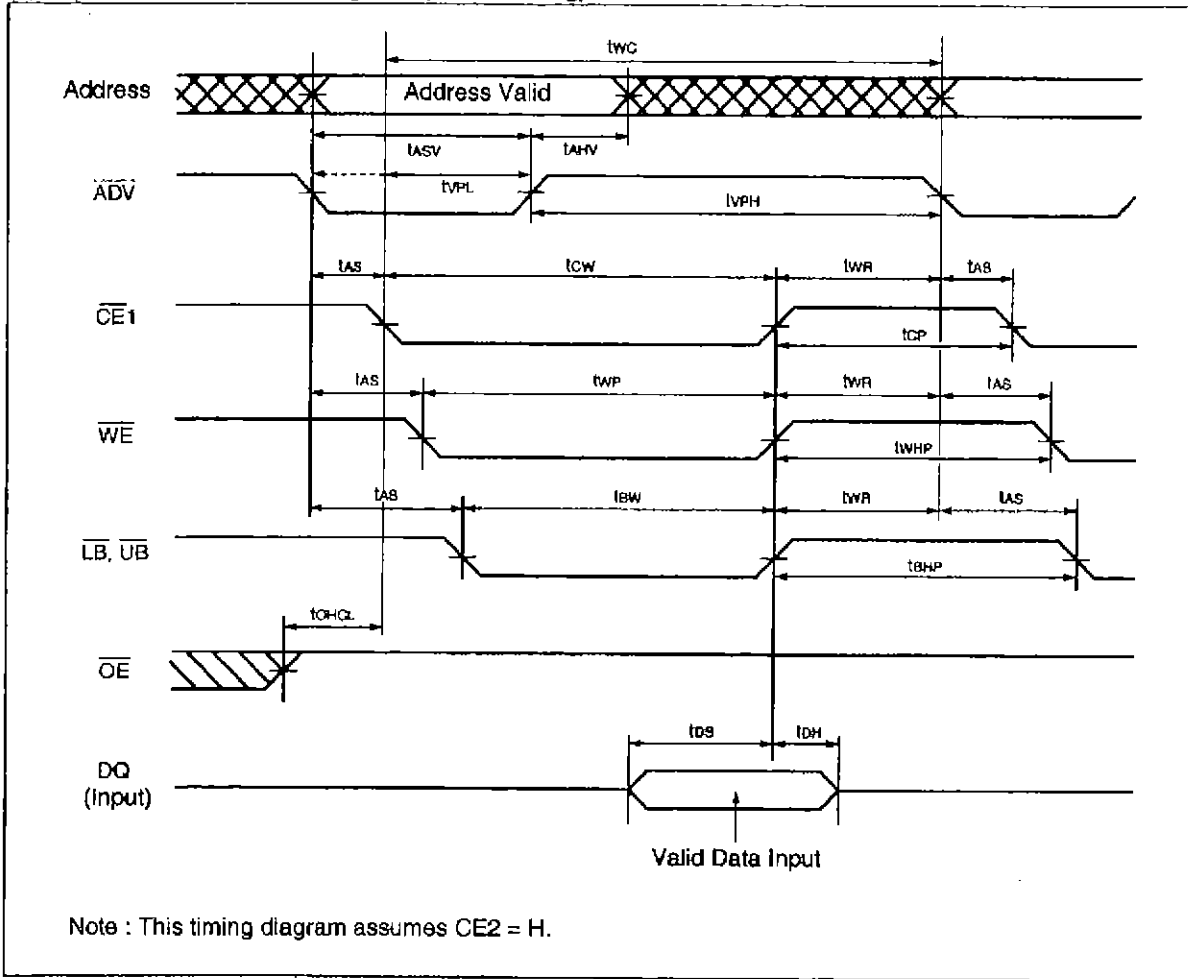
## MB82DBS02163C-70L

## (7) Asynchronous Write Timing #1-1 (Basic Timing)



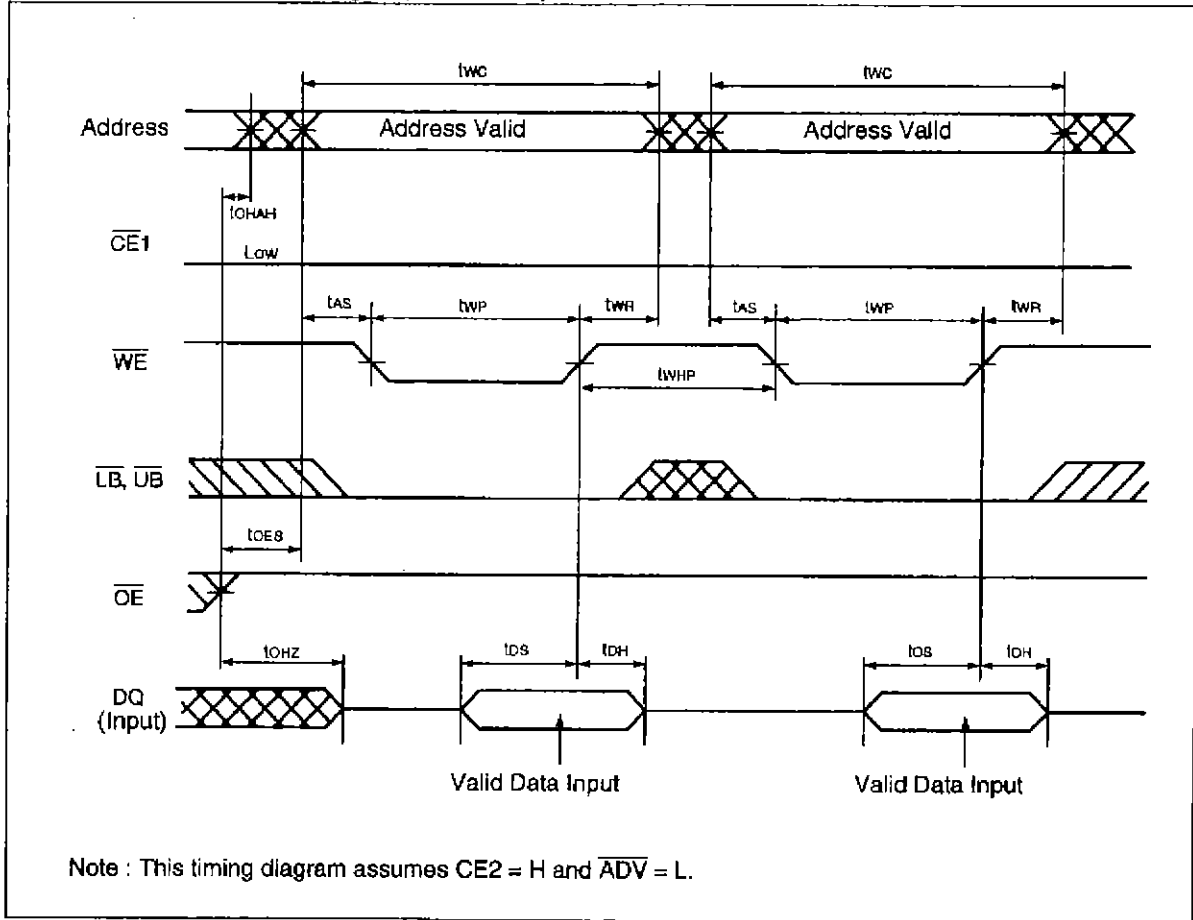
# MB82DBS02163C-70L

(8) Asynchronous Write Timing #1-2 (Basic Timing)



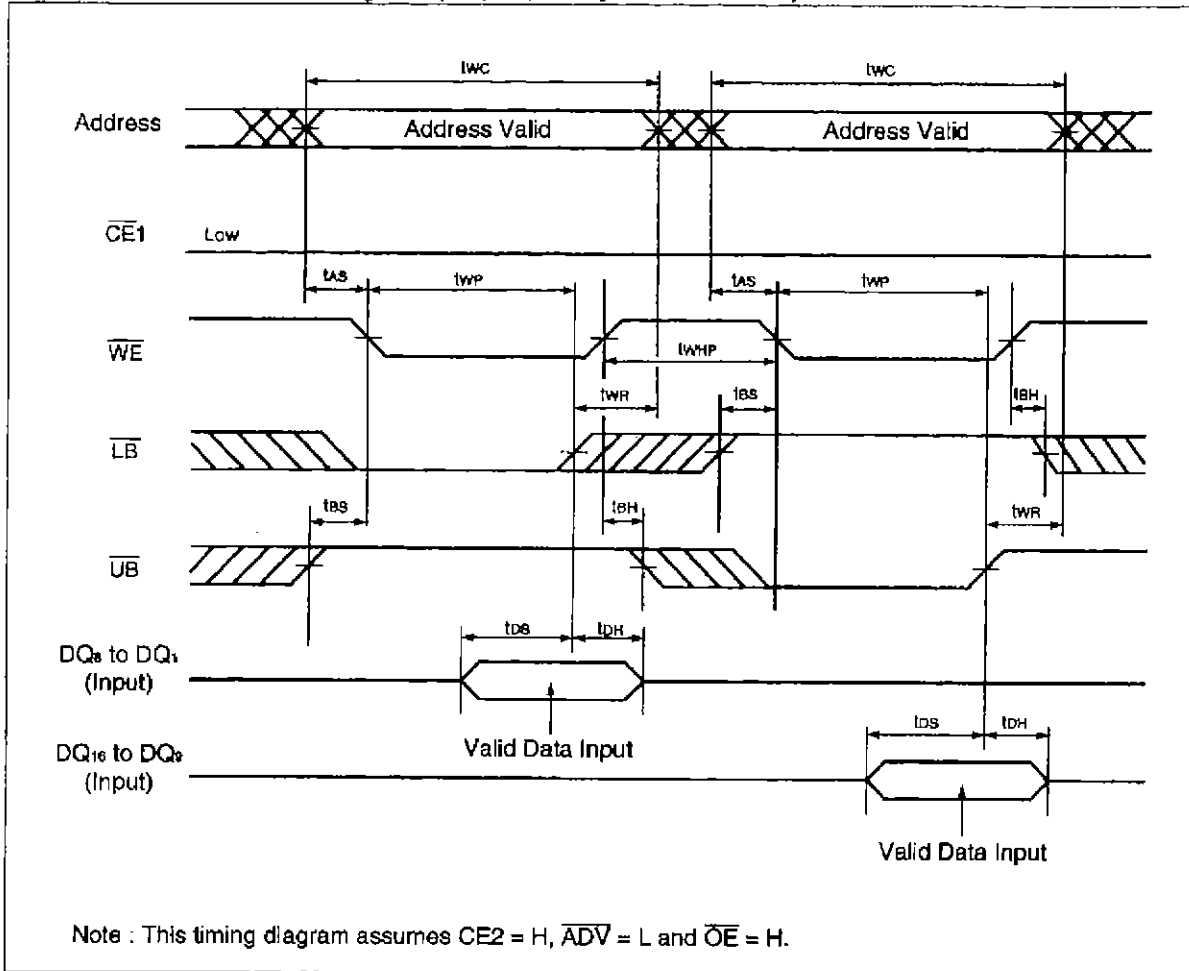
# MB82DBS02163C-70L

(9) Asynchronous Write Timing #2 (WE Control)



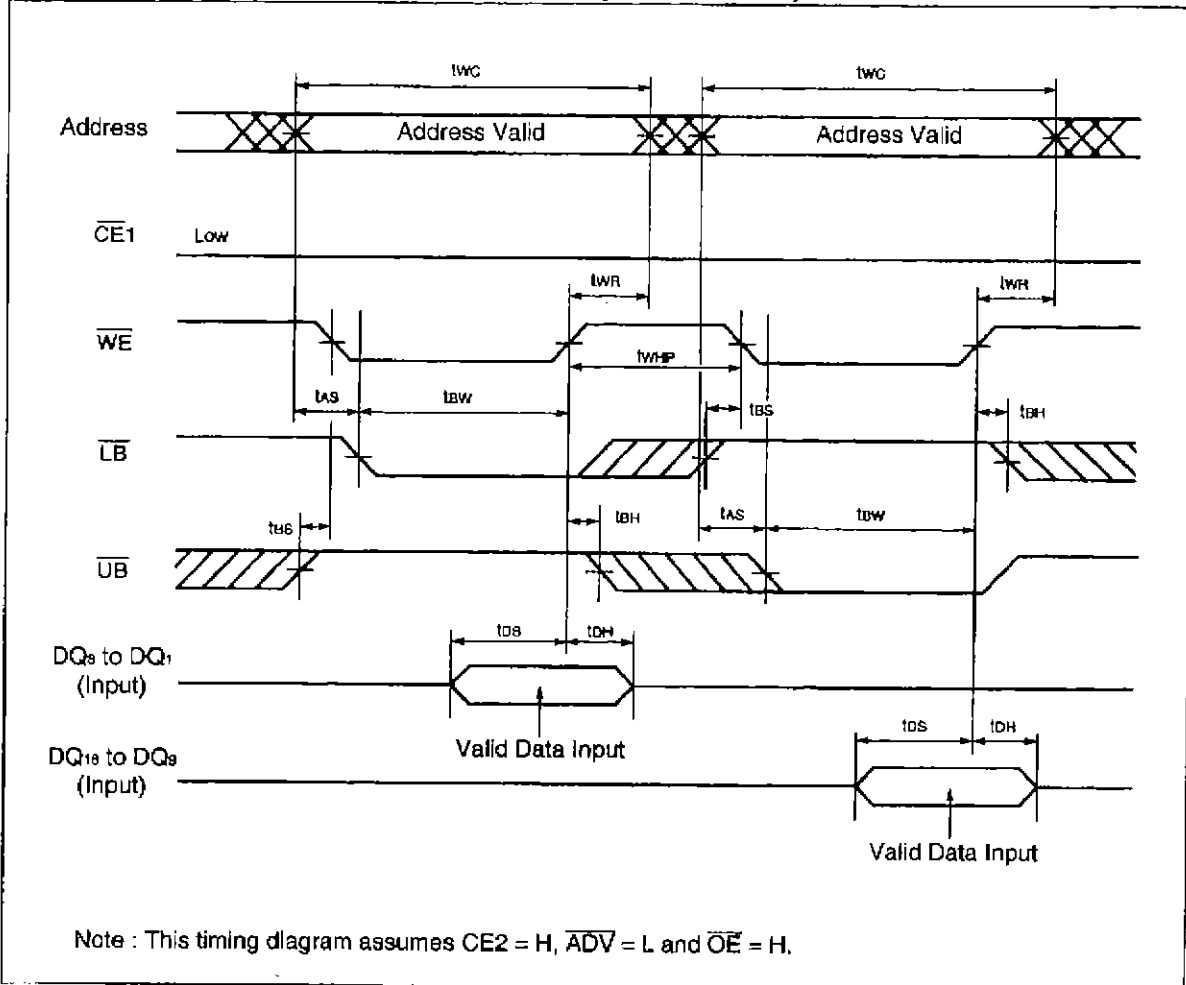
# MB82DBS02163C-70L

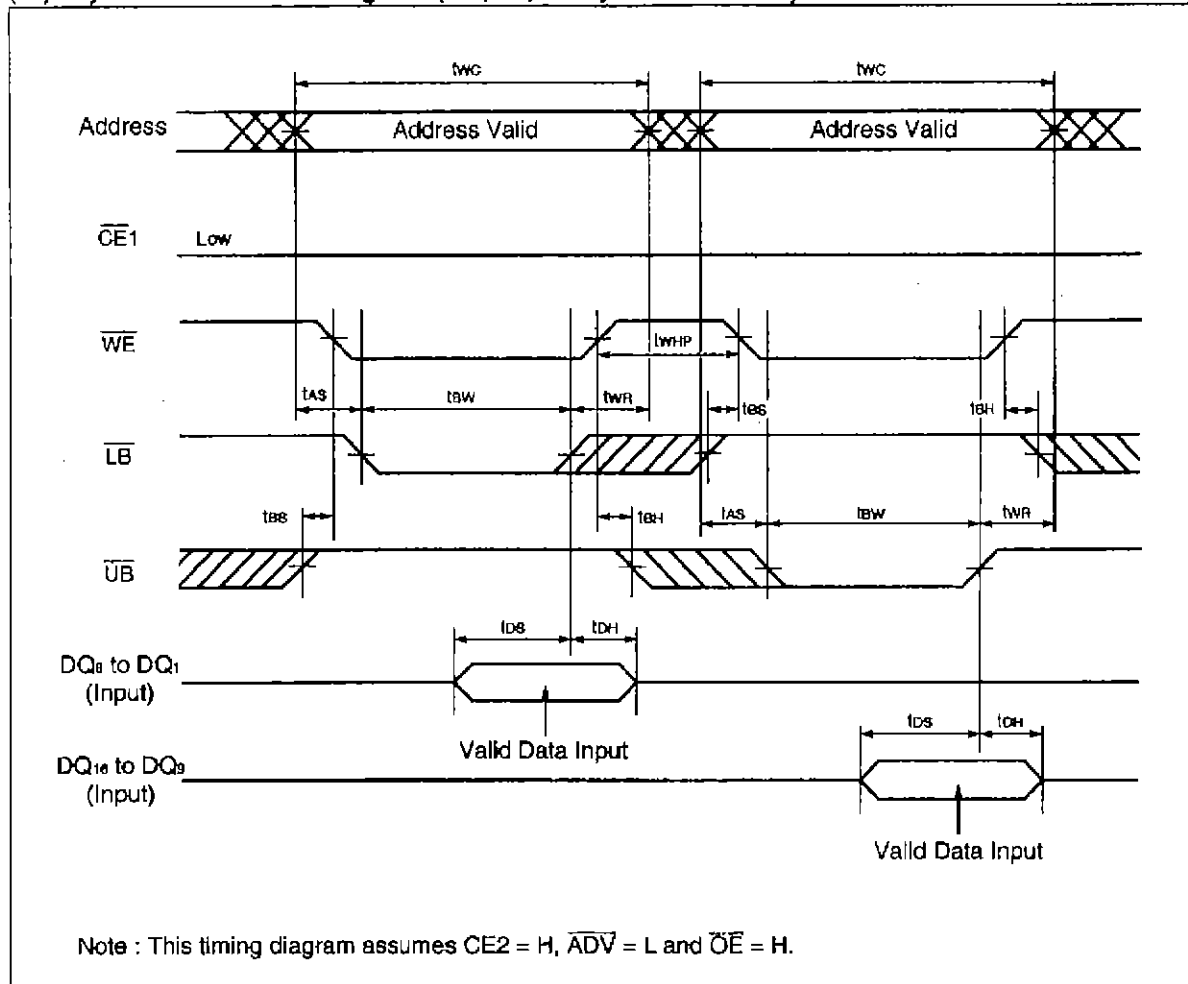
(10) Asynchronous Write Timing #3-1 ( $\overline{WE}$ ,  $\overline{LB}$ ,  $\overline{UB}$  Byte Write Control)



# MB82DBS02163C-70L

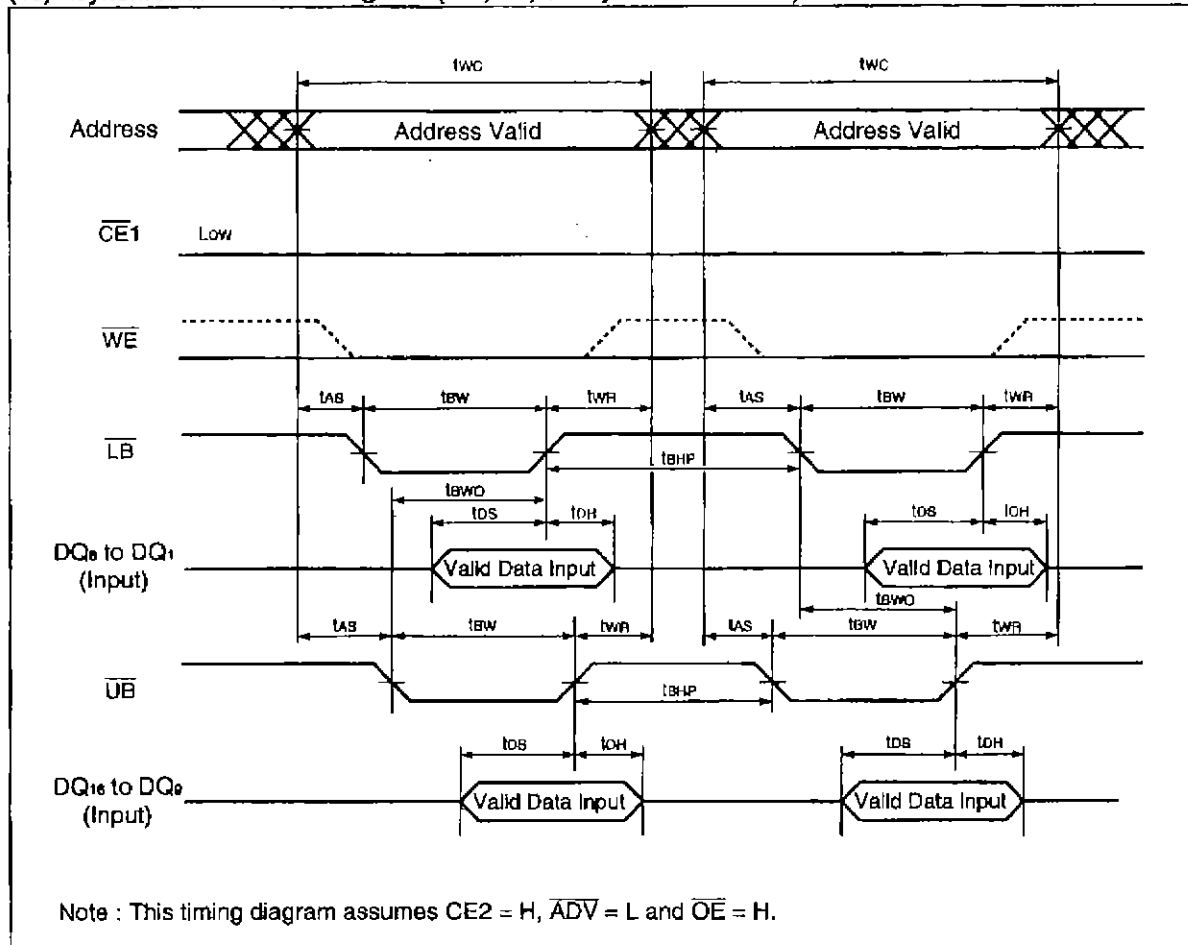
## (11) Asynchronous Write Timing #3-2 ( $\overline{WE}$ , $\overline{LB}$ , $\overline{UB}$ Byte Write Control)



**MB82DBS02163C-70L****(12) Asynchronous Write Timing #3-3 ( $\overline{WE}$ ,  $\overline{LB}$ ,  $\overline{UB}$  Byte Write Control)**

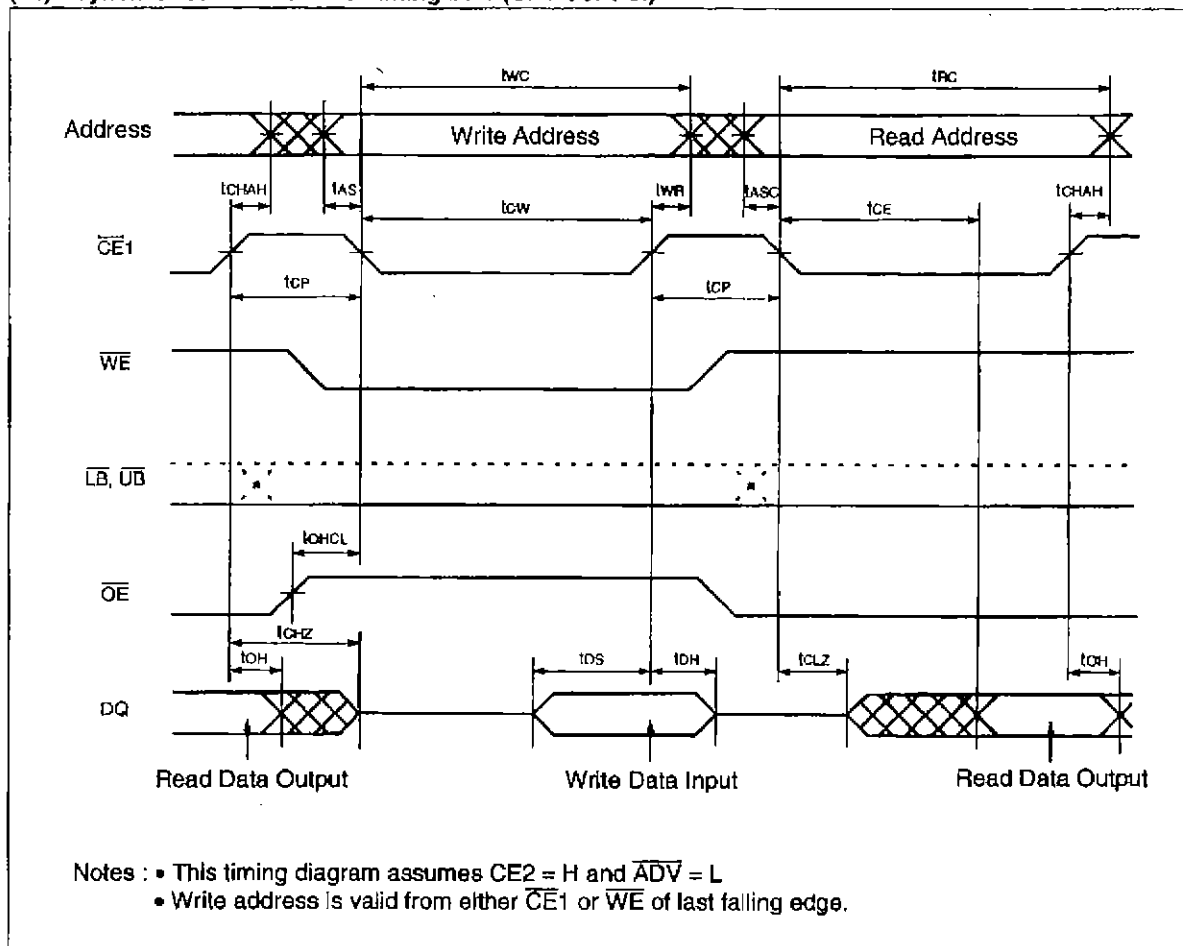


## MB82DBS02163C-70L

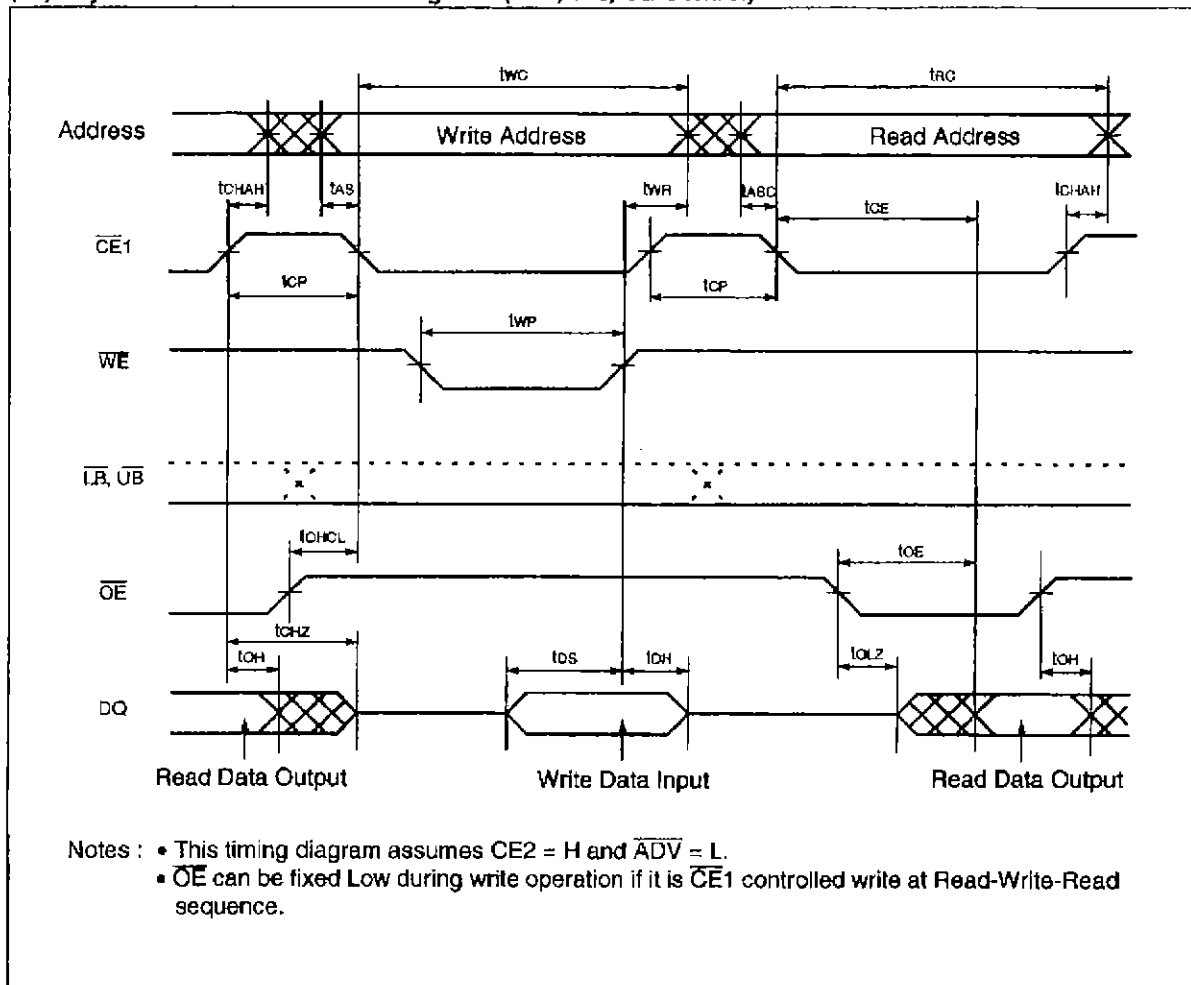
(13) Asynchronous Write Timing #3-4 ( $\overline{\text{WE}}$ ,  $\overline{\text{LB}}$ ,  $\overline{\text{UB}}$  Byte Write Control)

# MB82DBS02163C-70L

(14) Asynchronous Read/Write Timing #1-1 ( $\overline{CE1}$  Control)

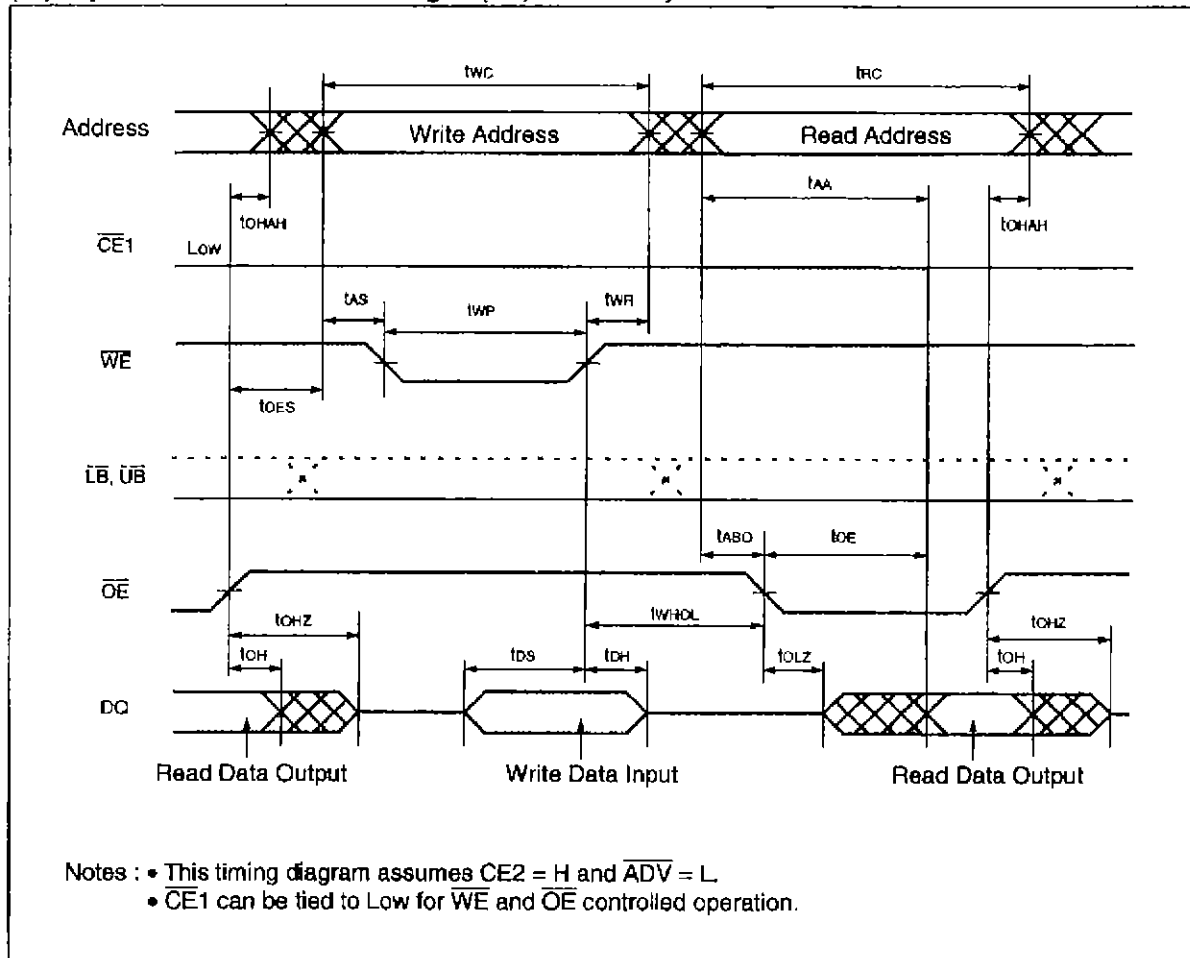


## MB82DBS02163C-70L

(15) Asynchronous Read/Write Timing #1-2 ( $\overline{CE1}$ ,  $\overline{WE}$ ,  $\overline{OE}$  Control)

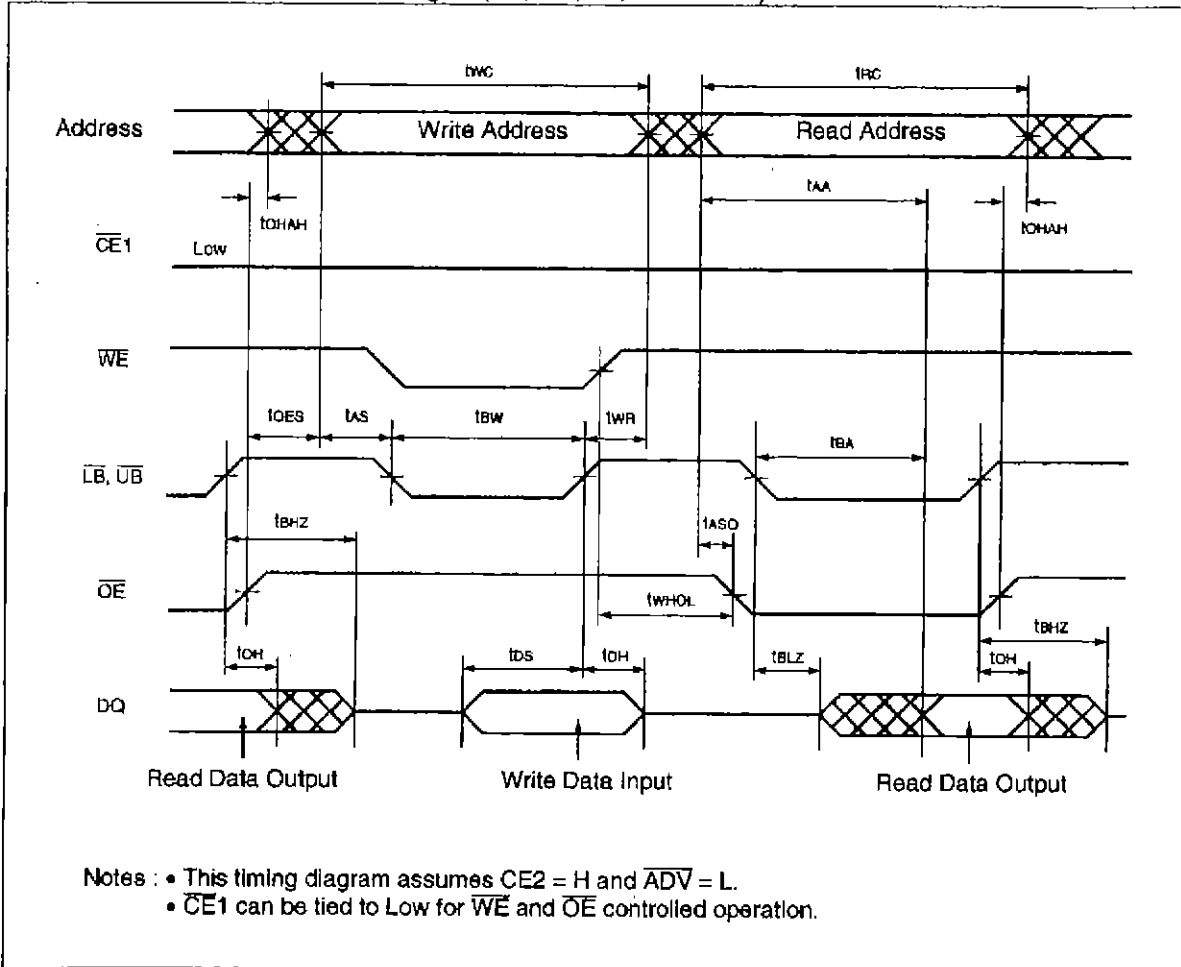
# MB82DBS02163C-70L

(16) Asynchronous Read/Write Timing #2 ( $\overline{OE}$ ,  $\overline{WE}$  Control)



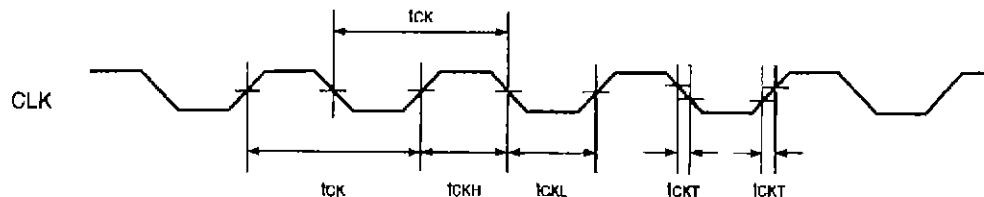
# MB82DBS02163C-70L

(17) Asynchronous Read/Write Timing #3 ( $\overline{OE}$ ,  $\overline{WE}$ ,  $\overline{LB}$ ,  $\overline{UB}$  Control)



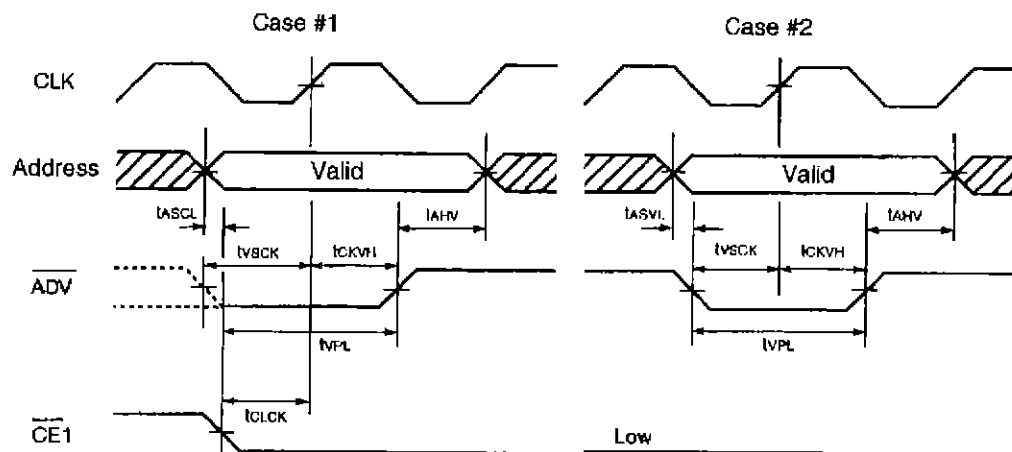
# MB82DBS02163C-70L

## (18) Clock Input Timing



- Notes :
- Stable clock input must be required during  $\overline{CE1} = L$ .
  - $t_{CK}$  is defined between valid clock edges.
  - $t_{CKT}$  is defined between  $V_{IH}$  (Min) and  $V_{IL}$  (Max)

## (19) Address Latch Timing (Synchronous Mode)



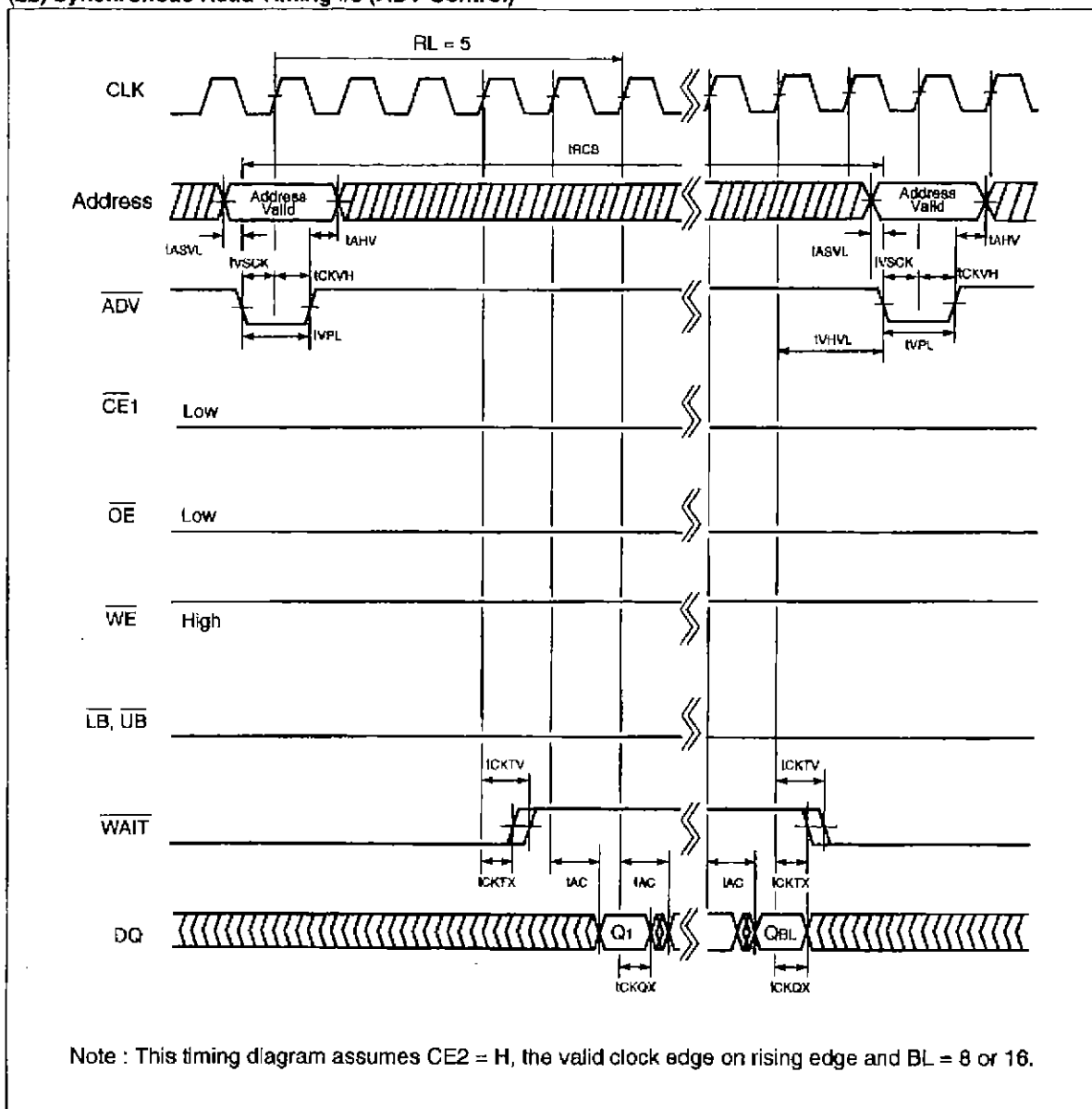
- Notes :
- Case #1 is the timing when  $\overline{CE1}$  is brought to Low after  $\overline{ADV}$  is brought to Low.
  - Case #2 is the timing when  $\overline{ADV}$  is brought to Low after  $\overline{CE1}$  is brought to Low.
  - $t_{VPL}$  is specified from the falling edge of either  $\overline{CE1}$  or  $\overline{ADV}$  whichever comes late.
  - At least one valid clock edge must be input during  $\overline{ADV} = L$ .
  - $t_{VSCCK}$  and  $t_{CLCK}$  are applied to the 1st valid clock edge during  $\overline{ADV} = L$ .

Timing diagram for the 74VHC163 4-bit binary counter. The diagram shows the relationship between CLK, Address, ADV, CE1, OE, WE, LB, UB, WAIT, and DQ signals. Key timing parameters are labeled, including setup and hold times for Address ( $t_{ASV}$ ,  $t_{AHV}$ ), ADV ( $t_{VSV}$ ,  $t_{VSH}$ ,  $t_{VSL}$ ,  $t_{VSH}$ ), CE1 ( $t_{CCLK}$ ), OE ( $t_{OLQ}$ ), WE ( $t_{BLO}$ ), LB, UB ( $t_{BLO}$ ), WAIT ( $t_{CKTV}$ ,  $t_{ACK}$ ,  $t_{ACK}$ ,  $t_{OHTZ}$ ), and DQ ( $t_{OLZ}$ ,  $t_{CKQX}$ ,  $t_{CKQX}$ ). The diagram is divided into two sections by a break symbol, with a note indicating  $RL = 5$ . The Address signal is shown as a bus with "Address Valid" periods. The DQ signal is shown as a bus with "High-Z" periods and data output (Q1, QBL).

NTC0097731

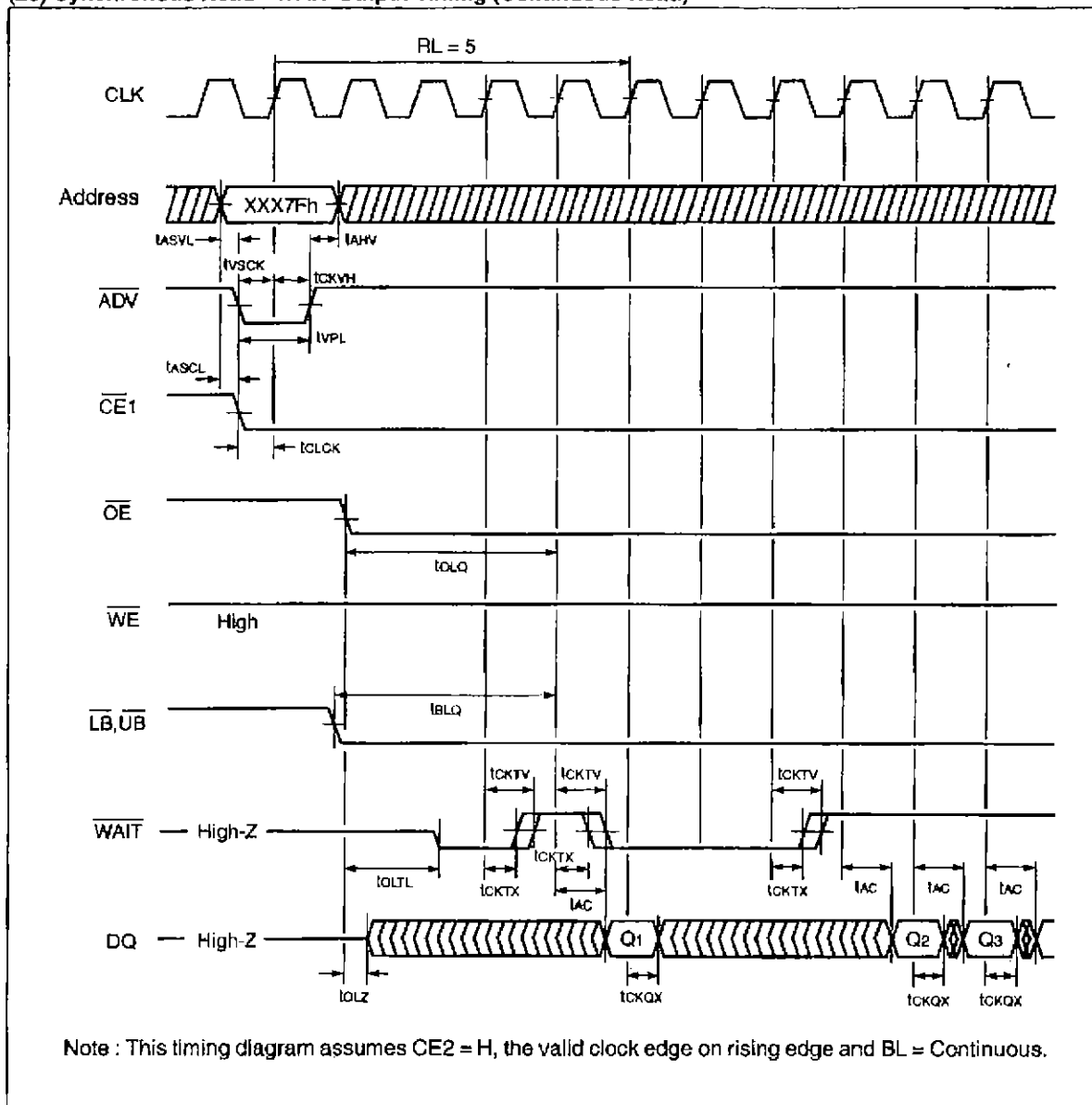


## MB82DBS02163C-70L

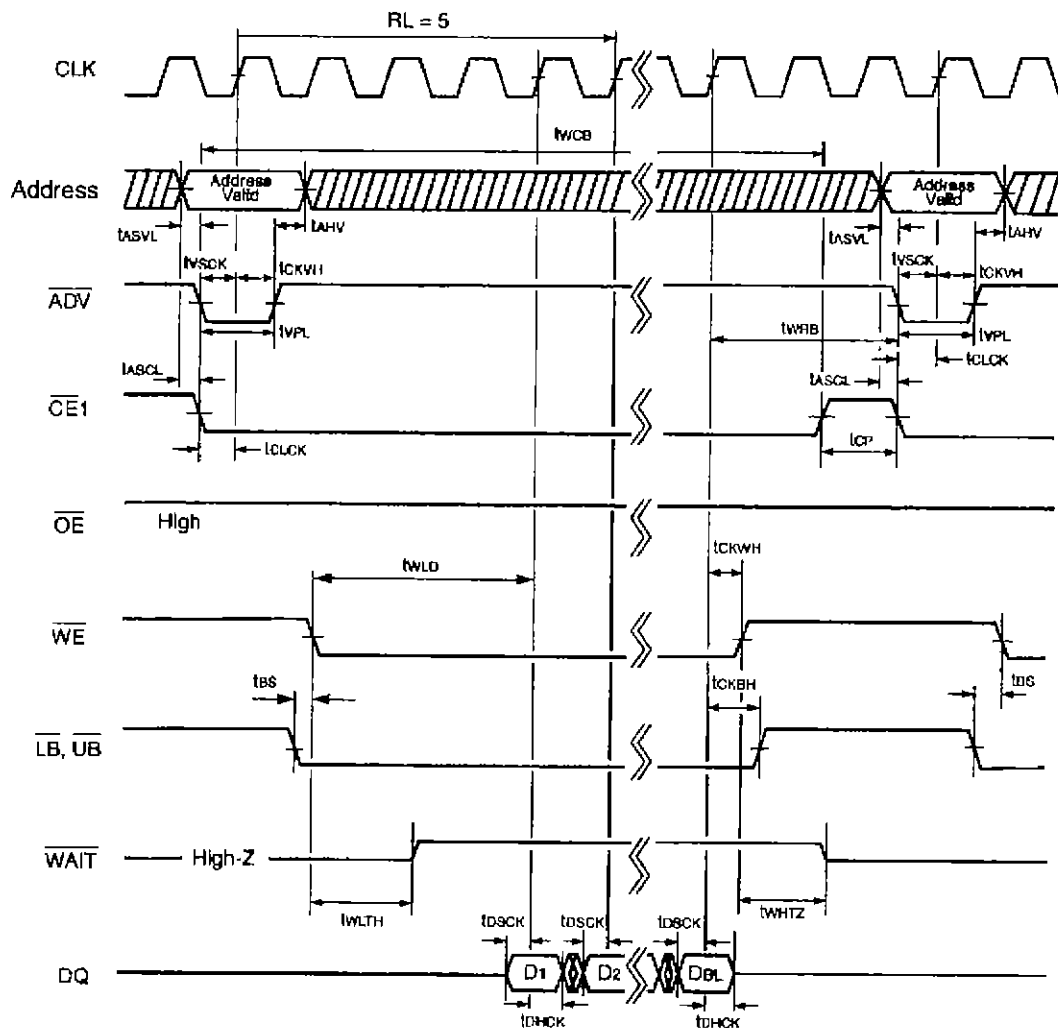
(22) Synchronous Read Timing #3 ( $\overline{\text{ADV}}$  Control)

# MB82DBS02163C-70L

(23) Synchronous Read -  $\overline{\text{WAIT}}$  Output Timing (Continuous Read)

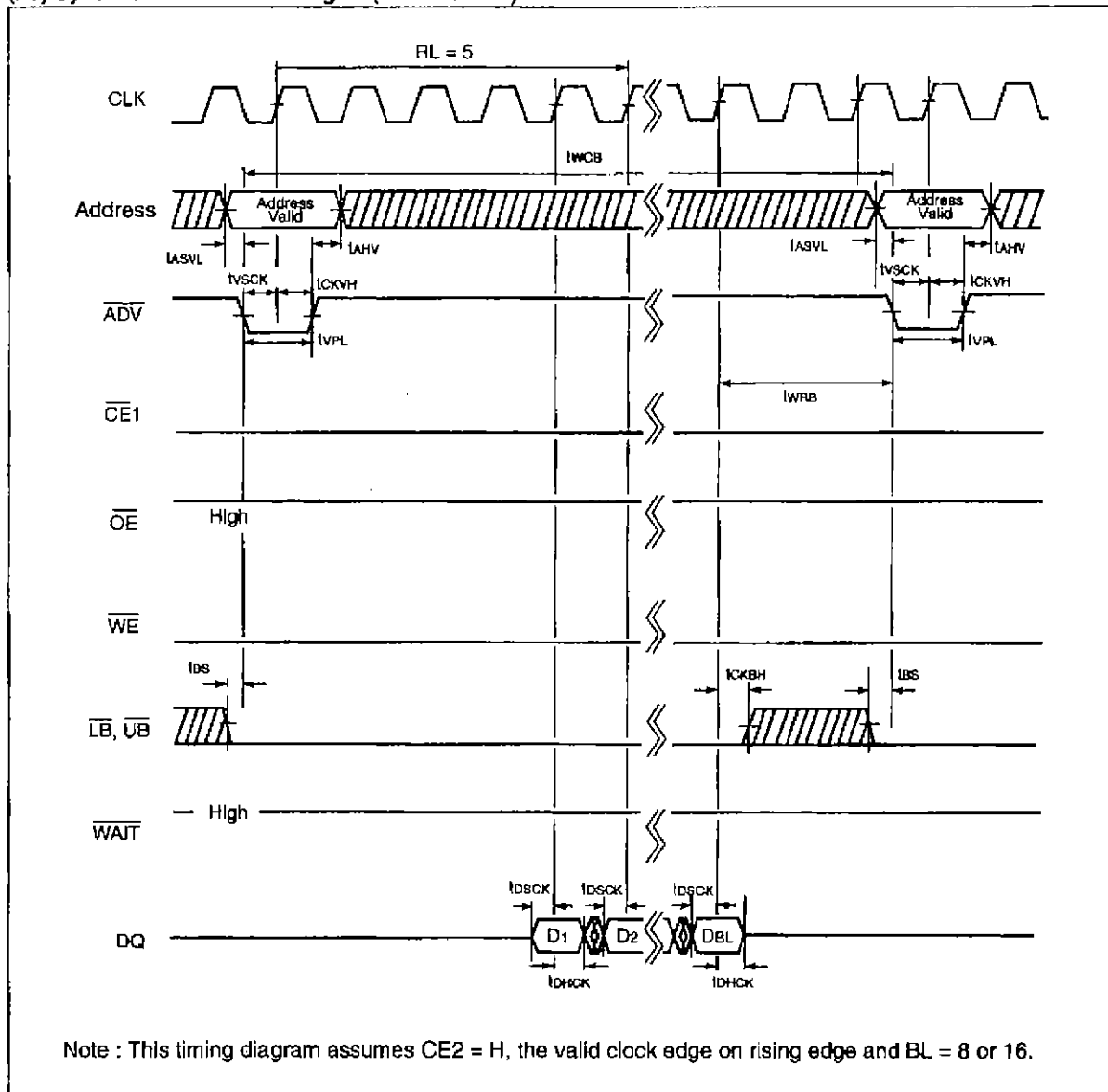


## MB82DBS02163C-70L

(24) Synchronous Write Timing #1 ( $\overline{WE}$  Level Control)

Note : This timing diagram assumes  $CE2 = H$ , the valid clock edge on rising edge and  $BL = 8$  or  $16$ .



**MB82DBS02163C-70L****(26) Synchronous Write Timing #3 ( $\overline{\text{ADV}}$  Control)**

The timing diagram illustrates the relationship between several control and data signals during a write operation. The signals shown are:

- CLK**: A periodic clock signal with period  $RL \approx 5$ .
- Address**: Shaded regions indicate "Address Valid" periods.
- ADV**: Active-low address strobe signal.
- CE1**: Active-low chip enable signal.
- OE**: Output Enable, held High.
- WE**: Active-low write enable signal.
- LB, UB**: Active-low bank select signals.
- WAIT**: Active-low wait signal, which goes High-Z during certain cycles.
- DQ**: Data bus, showing a write operation where data from memory element  $D_1$  is latched onto the bus.

Key timing parameters labeled include:

- $t_{WCB}$ : Write Command Burden time.
- $t_{ASVL}$ ,  $t_{AHV}$ : Address Strobe Valid/Low-to-High times.
- $t_{VSCK}$ ,  $t_{CKVH}$ : Strobe-to-Clock setup/hold times.
- $t_{VPL}$ : Address Strobe Pulse Width.
- $t_{WRB}$ : Write Recovery Time.
- $t_{SCL}$ ,  $t_{CLOCK}$ : Setup/hold times relative to clock.
- $t_{CP}$ : Clock Period.
- $t_{WLD}$ : Write Latency Delay.
- $t_{CKBH}$ : Clock-to-Bank Select Hold time.
- $t_{BS}$ : Bank Select Setup/Hold times.
- $t_{WLTH}$ : Wait Low-to-High time.
- $t_{DSCK}$ ,  $t_{WHZ}$ : Data Setup/Hold times relative to clock.
- $t_{DHCK}$ : Data Hold time after clock edge.

Timing diagram for the 74VHC163 4-bit binary counter. The diagram illustrates the relationship between various signals and their timing parameters. The signals shown are CLK (clock), Address (with valid period), ADV (address strobe), CE1 (count enable), OE (output enable), WE (write enable), LB,UB (load/unload), WAIT (wait signal), and DQ (data bus). The timing parameters are labeled with 't' and include setup/hold times, propagation delays, and clock-to-output delays. A note specifies  $RL = 5$  and  $t_{MCOB}$ . The diagram is divided into two sections: the first section shows the initial setup and the second section shows the counting sequence (D1, D2, D3, ..., Dn).

Note : This timing diagram assumes CE2 = H, the valid clock edge on rising edge and BL = 8 or 16.

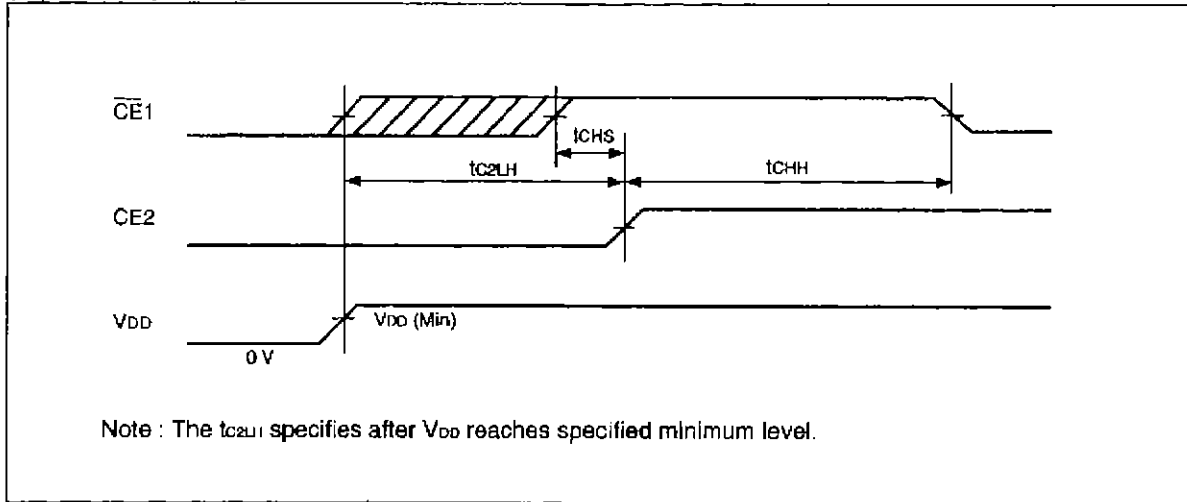


**Note :** This timing diagram assumes CE2 = H, the valid clock edge on rising edge and BL = 8 or 16.

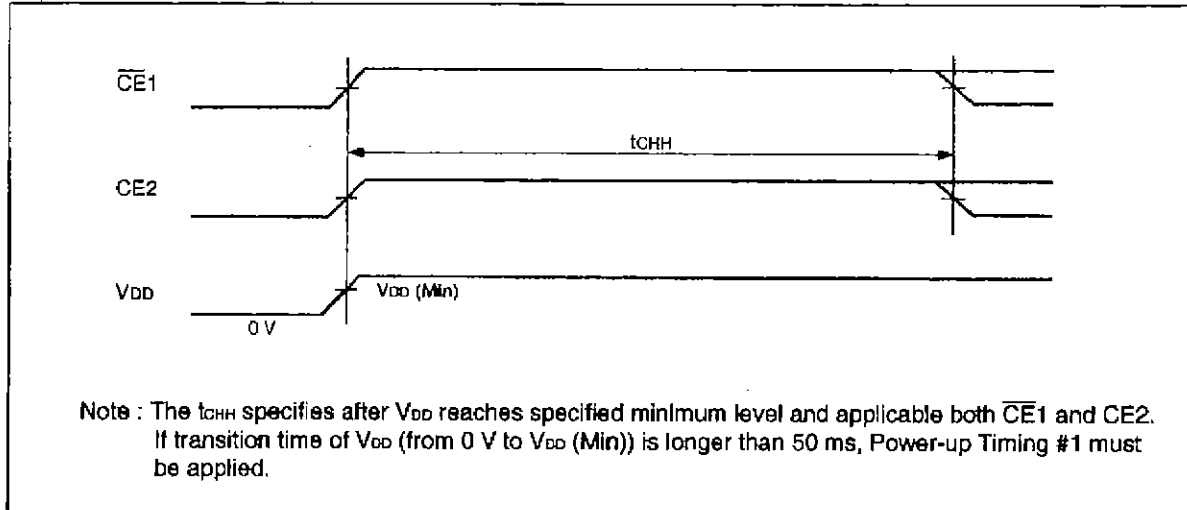
NTC0097741

## MB82DBS02163C-70L

## (32) Power-up Timing #1

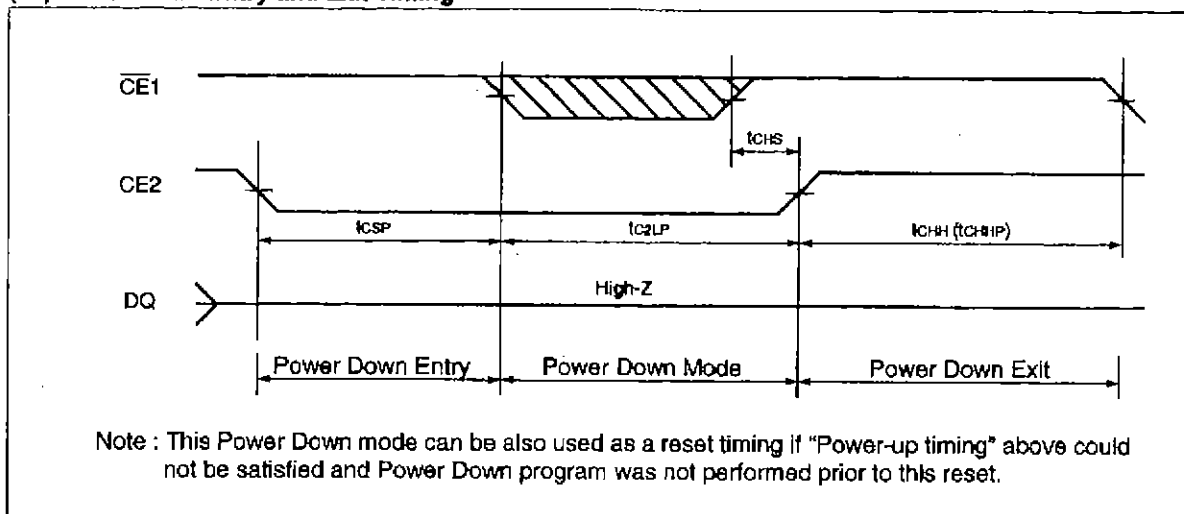


## (33) Power-up Timing #2

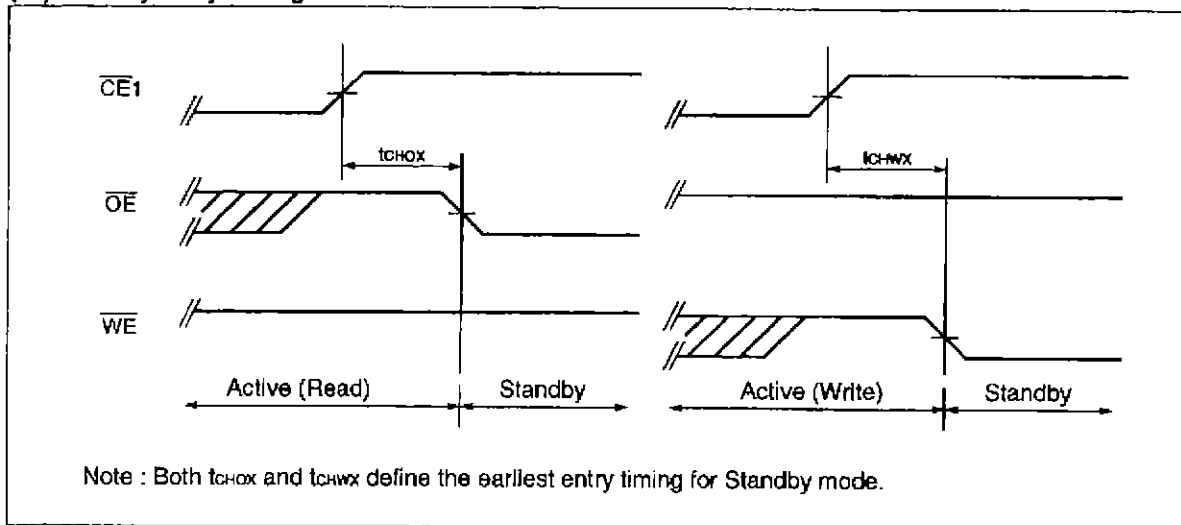


# MB82DBS02163C-70L

## (34) Power Down Entry and Exit Timing

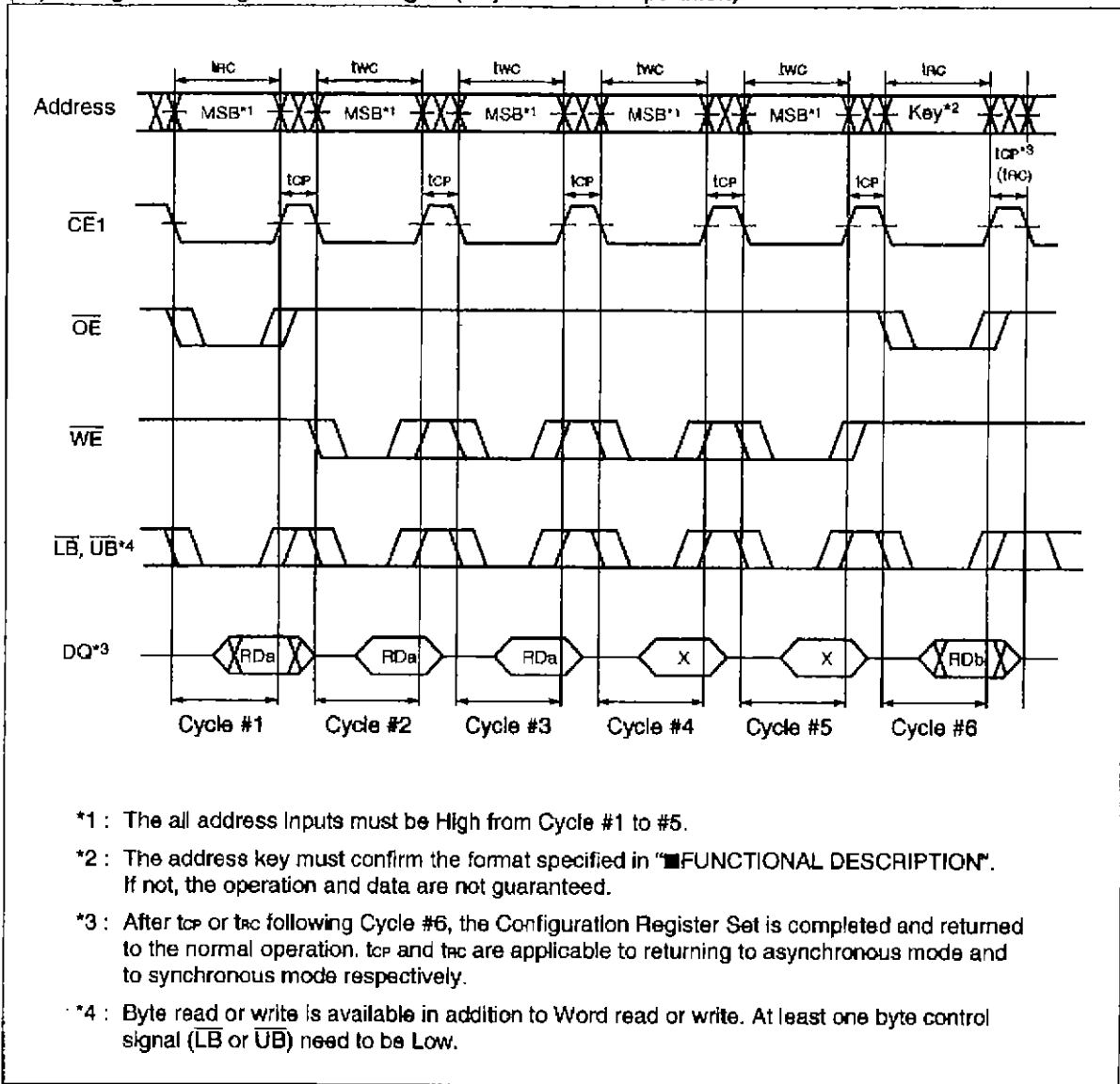


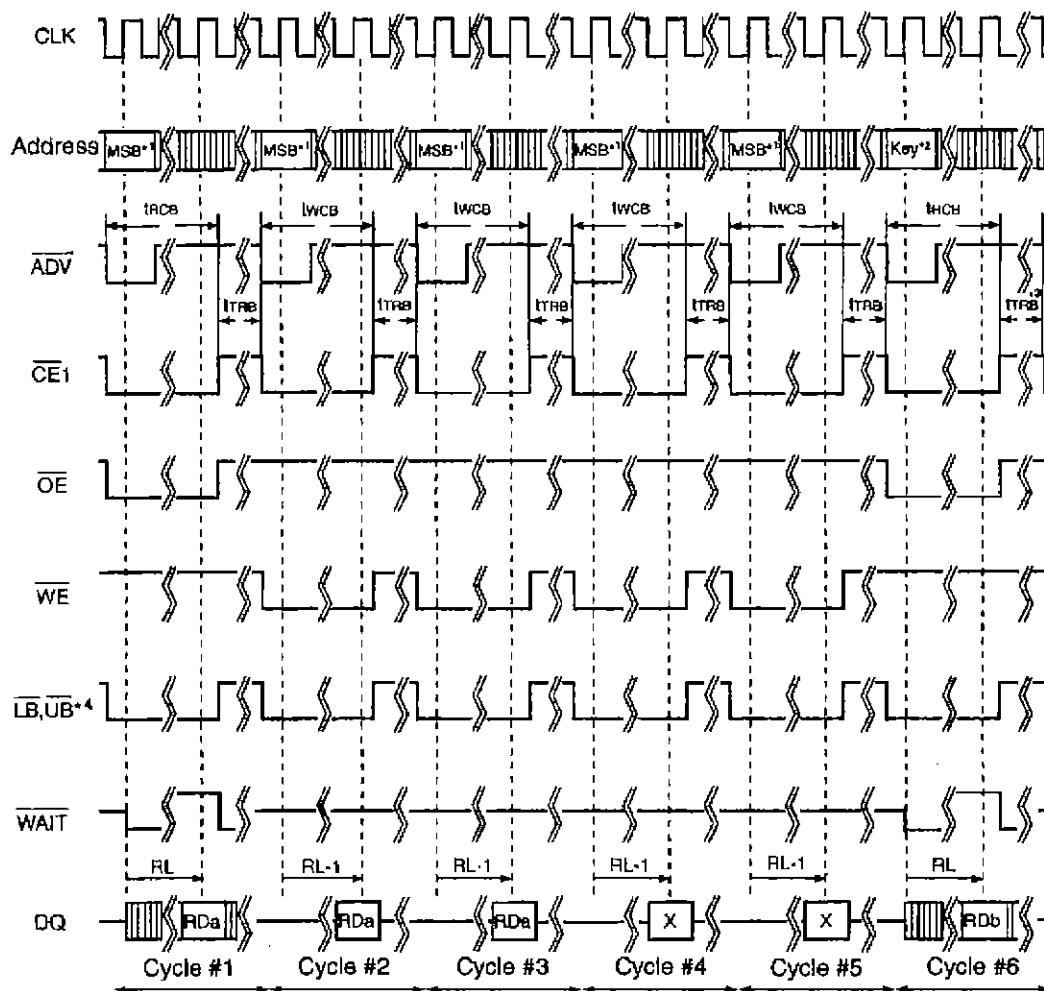
## (35) Standby Entry Timing after Read or Write



# MB82DBS02163C-70L

(38) Configuration Register Set Timing #1 (Asynchronous Operation)



**MB82DBS02163C-70L****(37) Configuration Register Set Timing #2 (Synchronous Operation)**

\*1 : The all address inputs must be High from Cycle #1 to #5.

\*2 : The address key must confirm the format specified in "FUNCTIONAL DESCRIPTION".  
If not, the operation and data are not guaranteed.

\*3 : After  $t_{TRB}$  following Cycle #6, the Configuration Register Set is completed and returned to the normal operation.

\*4 : Byte read or write is available in addition to Word read or write. At least one byte control signal ( $\overline{LB}$  or  $\overline{UB}$ ) need to be Low.

**MB82DBS02163C-70L****■ BONDING PAD INFORMATION**

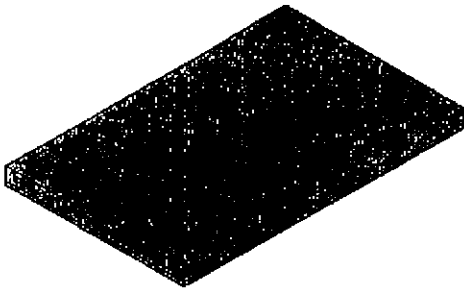
Please contact local FUJITSU representative for pad layout and pad coordinate information.

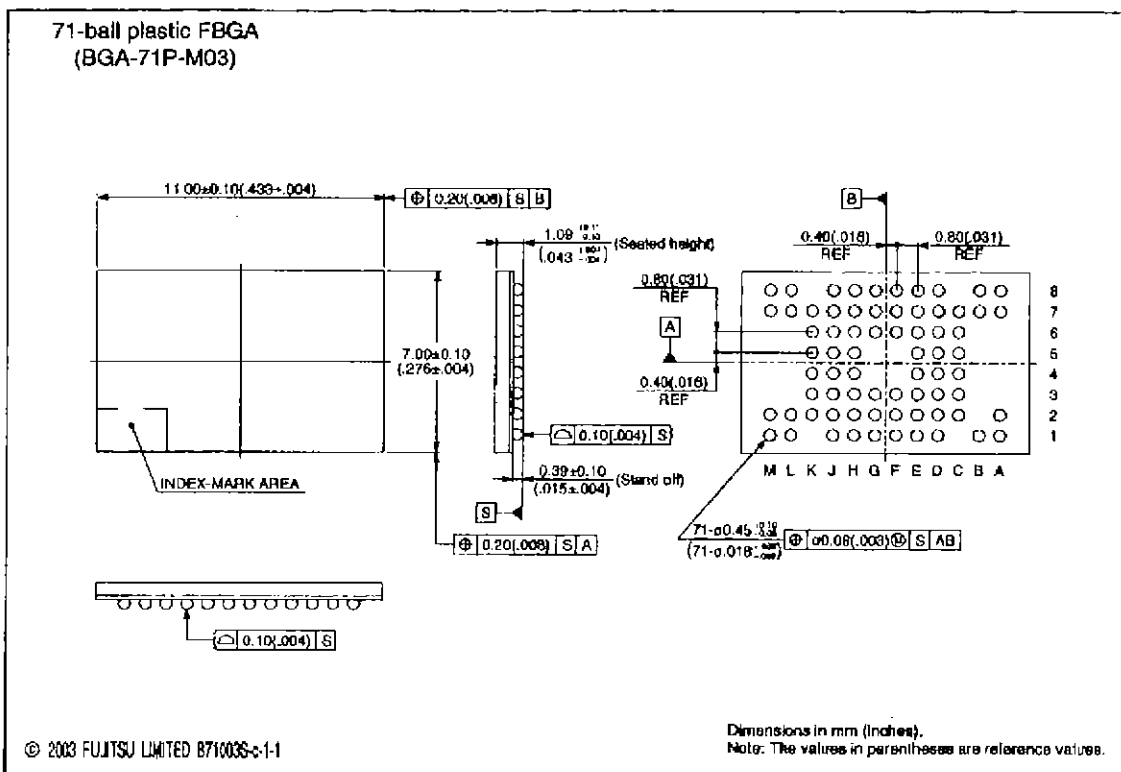
**■ ORDERING INFORMATION**

Part Number	Shipping Form / Package	Remarks
MB82DBS02163C-70LWT	wafer	
MB82DBS02163C-70LPBT	71-ball plastic FBGA (BGA-71P-M03)	

# MB82DBS02163C-70L

## ■ PACKAGE DIMENSION

<p>71-ball plastic FBGA</p>  <p>(BGA-71P-M03)</p>	Ball pitch	0.80 mm
	Package width x package length	7.00 x 11.00 mm
	Lead shape	Soldering ball
	Sealing method	Plastic mold
	Ball size	Ø0.45 mm
	Mounting height	1.20 mm Max.
	Weight	0.14 g





**MB82DBS02163C-70L****FUJITSU LIMITED**

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The information, such as descriptions of function and application circuit examples, in this document are presented solely for the purpose of reference to show examples of operations and uses of Fujitsu semiconductor device; Fujitsu does not warrant proper operation of the device with respect to use based on such information. When you develop equipment incorporating the device based on such information, you must assume any responsibility arising out of such use of the information. Fujitsu assumes no liability for any damages whatsoever arising out of the use of the information.

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Edited Business Promotion Dept.

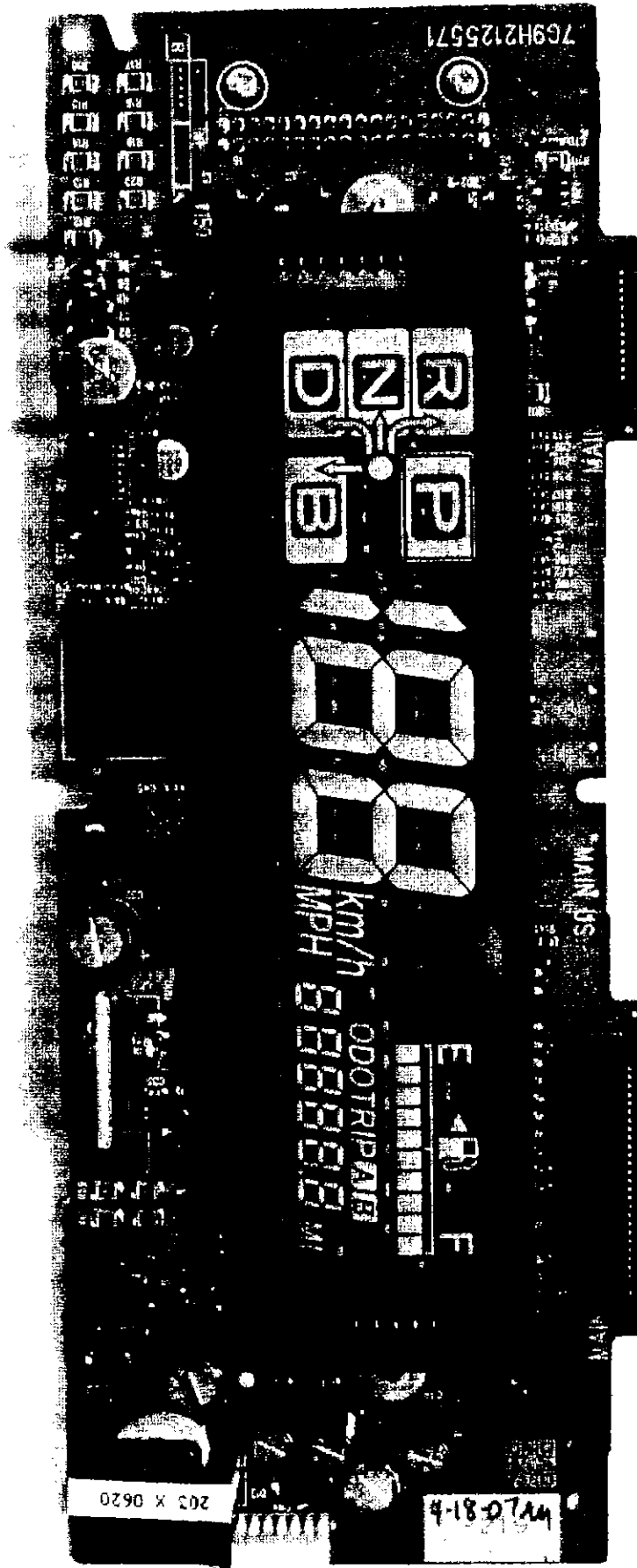
FO604

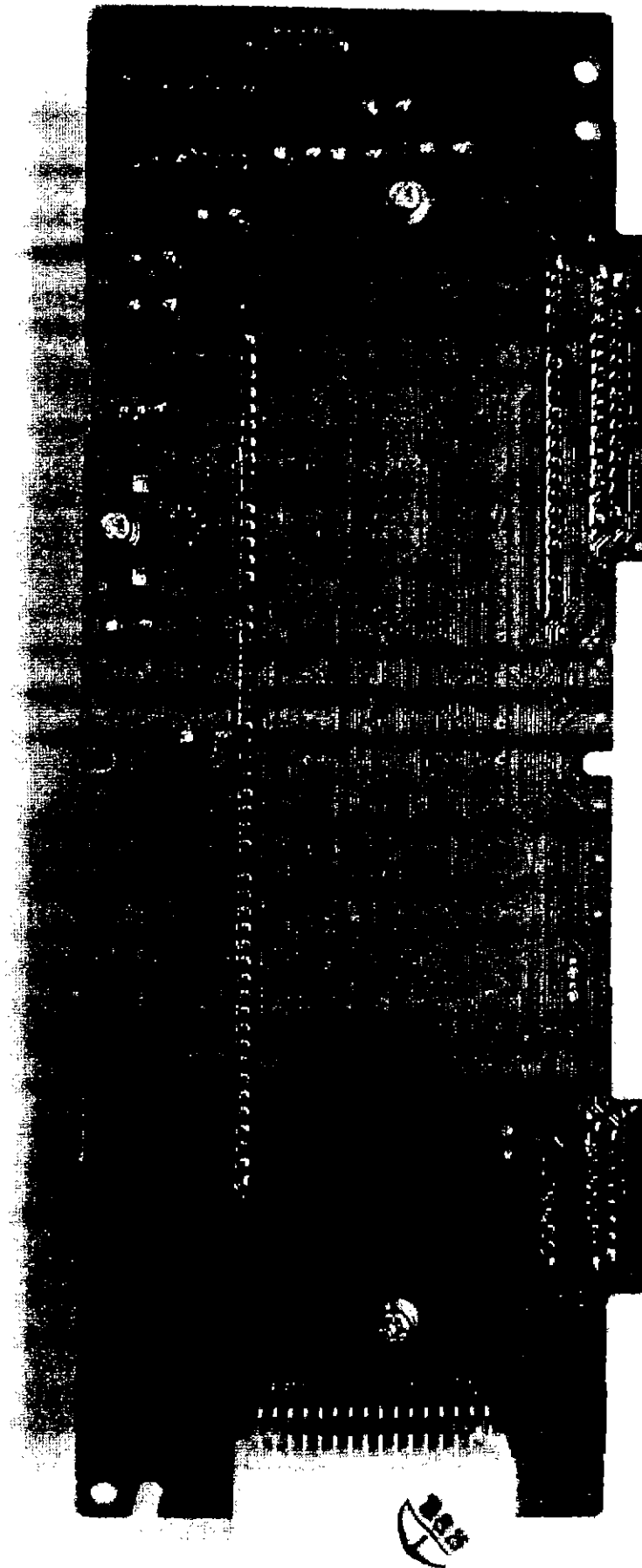
NTC0097748

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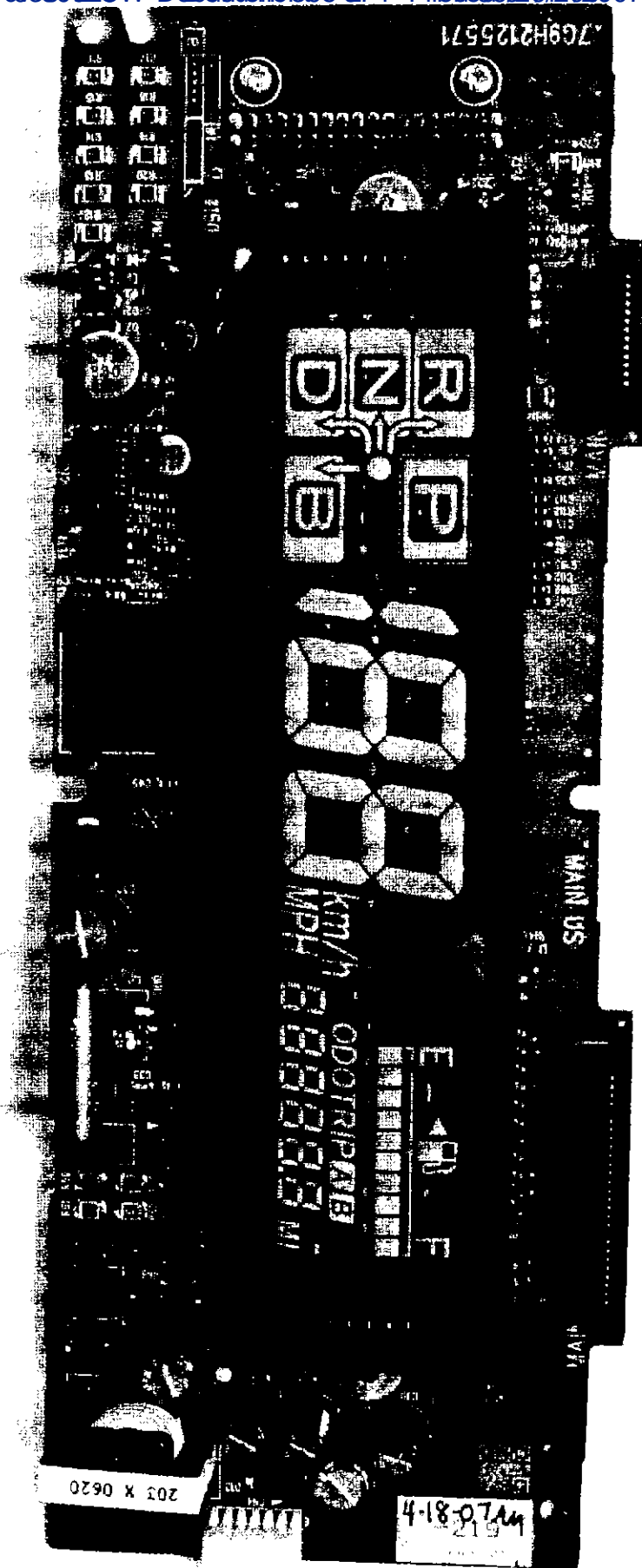
## EXHIBIT F

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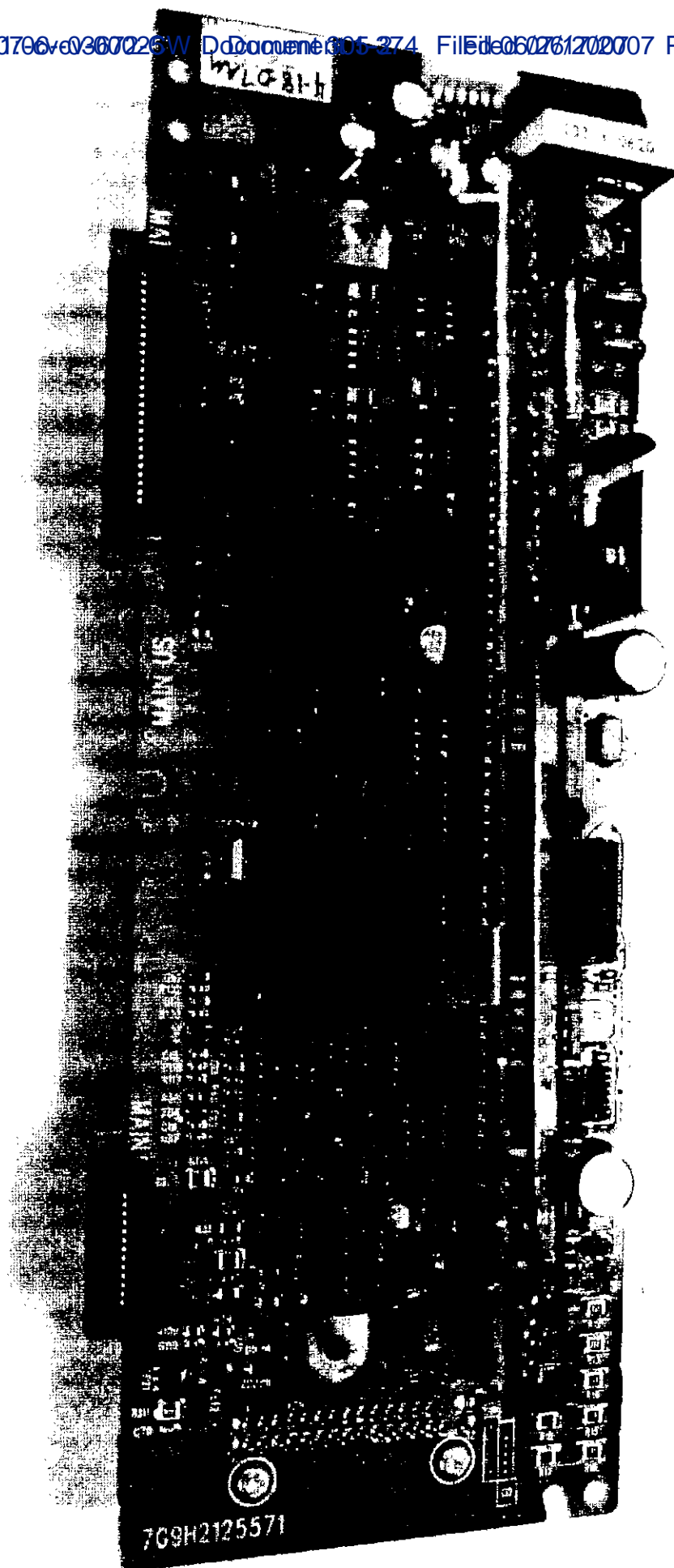




NTC0097750



NTC0097751



NTC0097752

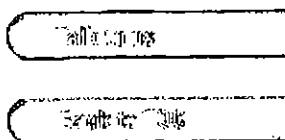


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## EXHIBIT J

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## Fujitsu and Source Medical showcase pen-based outpatient information system

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**Santa Clara 10 February 2003** *Fujitsu PC Corporation (FPC), a wholly-owned subsidiary of Fujitsu Limited, and Source Medical have created a highly efficient pen-based outpatient information system to improve patient care and streamline record keeping procedures. The application is a result of a strategic relationship between the two companies to collaborate on application-specific solutions for the health care marketplace. Fujitsu and Source Medical unveiled and showcased the new system using a Fujitsu Stylistic ST4000 Series Tablet PC to run the Source Medical TherapySource application during the Healthcare Information and Management Systems Society (HIMSS) Annual Conference and Exhibition in San Diego.*

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The blending of the Source Medical TherapySource application with the mobility and power of the Fujitsu Tablet PC is an ideal solution for health care professionals. The system provides professionals with the flexibility and freedom to move throughout a care facility while interacting with patients and electronically documenting treatments.

The Fujitsu/Source Medical collaboration has experienced success in the past when the application was installed on

a Fujitsu LifeBook B Series notebook, a pen-based computer. Since 1999, the Fujitsu/Source Medical outpatient data management solution has been implemented into more than 1200 patient care facilities with approximately 6000 professionals using the system and making more than 30,000 electronic patient notes daily.

HealthSouth, a large provider of outpatient surgery, diagnostic imaging and rehabilitative health care services, has integrated the Fujitsu/Source Medical solution into its network of care facilities throughout North America and the world to create a highly effective patient record keeping system. "Computers and the Internet are the future of health care, and Source Medical is on the cutting edge of this technology", stated Richard M. Scrushy, HealthSouth chairman of the board and chief executive officer. "TherapySource has had a tremendous impact in the way our therapists work with patients, allowing them to focus on high-quality, cost-effective health care."

The TherapySource application is a complete, end-to-end information management solution for rehabilitation therapists, featuring an integrated suite of applications working in conjunction to move a patient through the entire outpatient health care process, including scheduling, registration, clinical documentation, coding and reporting. This application provides a fast and meticulous method of collecting and communicating patient data with improved accuracy, completeness and timeliness of information.

"Fujitsu is excited about introducing the Stylistic ST4000 Series Tablet PC outfitted with the Source Medical application to the health care industry", stated Sara Nelson, vice president of marketing, Fujitsu PC Corporation. "The ST4000 Tablet PC offers increased worker productivity by providing users a more natural form of computing. When combined with a robust application such as TherapySource, the Tablet PC becomes an invaluable tool for health care workers to perform their daily tasks more efficiently and more accurately."

The Stylistic ST4000 Series Tablet PC is an evolutionary step in mobile computing. Its innovative design offers maximum flexibility, allowing it to adapt to a variety of usage patterns. Unlike traditional PCs, the Stylistic ST4000 Series Tablet PC can be used in places where traditional notebook computers are not practical or widely accepted. Users can carry their Stylistic ST4000 Series Tablet PC like a notepad to enter data, take notes or access information unobtrusively while on their feet or in a meeting.

With constant access to critical company data and applications, users can be more productive and capable of delivering immediate and accurate responses. They can also use their Tablet PC as a notebook or desktop computer by either complementing it with a keyboard in the Fujitsu attache case or placing it on their desk in the optional Stylistic ST4000 Series Tablet Dock.

Source Medical is a provider of outpatient information solutions, with products installed in over 3500 ambulatory surgery centres, surgical hospitals, rehabilitation clinics, radiology facilities and physician practices throughout the United States, Canada, Mexico, and Guam.

Fujitsu PC Corporation is a provider of ultra-mobile computing solutions. The company delivers high-performance mobile computing solutions for the North American market, including a wide range of LifeBook notebooks and Stylistic tablets. Fujitsu PC Corporation emphasises leading-edge technology, exceptional product quality, user comfort and productivity, and outstanding customer service as primary competitive advantages.

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**Leslie Versweyveld**

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## EXHIBIT K

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<b>Products Containing MCU Devices</b>	<b>Fujitsu Ltd.'s ("FJ") claims</b>	<b>What the evidence demonstrates</b>
Toyota Prius (MB90583C)	Accused MCU devices are not available on Guam	Toyota Prius contains an accused MCU device and is commercially available on Guam. See Exhibits F, G, M, Q, and O.
Sony Playstation Portable <sup>1</sup> ("PSP") (MB44C012)	Accused MCU devices are not available on Guam	Sony PSP contains a possible accused MCU device and is commercially available on Guam. See Exhibits B, M, P, and O.
Nintendo DS Lite (MB82DBS02163C)	Accused MCU devices are not available on Guam	Nintendo DS Lite contains an accused MCU device and is commercially available on Guam. See Exhibits C, M, N, P, O, and T.
MB91F362PFV (32-Bit RISC microcontrollers)	FJ has no direct response rebutting this sale	Accused MCU devices are commercially available on Guam.
Computer Battery (32-Bit RISC microcontrollers)	Not liable for actions of distributor.	Products containing accused MCU devices are directly sold on Guam.
Laptop Computer (32-Bit RISC microcontrollers)	Not liable for actions of distributor.	Products containing accused MCU devices are commercially available on Guam.
Computer Hard Drive (32-Bit RISC microcontrollers)	Not liable for actions of distributor.	Products containing accused MCU devices are commercially available on Guam.
BMW 5 and 7 series automobiles <sup>2</sup> Various MCUs (including possible FlexRay and CAN controllers), GDC's and components for MOST system	Defendants claim one of the accused MCU devices are not available on BMW automobiles until 2008.	FJ does not deny that the accused MCU devices are incorporated into BMW automobiles. Documents show accused MCU devices are incorporated into BMW automobiles. See Exhibit H.

<sup>1</sup> See Exhibit B of Nanya's Sur-Reply, Materials related to MCU device (MB44C012) found in Sony PSP game console. Neither Fujitsu Ltd. nor FMA produced documents regarding this MCU device despite its clear relevance to Nanya's discovery requests. Because of Defendants' failure to produce documents related to this device, Nanya needs further documents from Defendants and investigation to be able to confirm whether this device infringes Nanya's patents. Nanya's discovery of this MCU device and others that are incorporated into consumer and automobile products found on Guam and Fujitsu Ltd.'s and FMA's failure to produce documents related to these devices clearly establishes that Defendants are withholding key documents on the sale and use of their accused products in the U.S. generally that would reveal placement into the stream of products traceable to Guam.

<sup>2</sup> Despite representing at the June 20, 2007 Hearing for Defendants' Motion for Immediate Transfer for Convenience that one of the accused MCU devices would not be present in BMW automobiles until 2008, there is evidence demonstrating that Fujitsu has been selling various MCUs to parts suppliers to be incorporated into BMW automobiles in the past several years. See Exhibit E to Plaintiffs' Sur-Reply, Materials evidencing MCU devices being sold or offered for sale to be incorporated into BMW automobiles.

Hyundai automobiles Various MCUs (including possible FlexRay and CAN controllers), GDC's and components for MOST system	No response	FJ does not deny that the accused MCU devices are incorporated into Hyundai automobiles.
Ford automobiles Various MCUs (including possible FlexRay and CAN controllers)	No response	Documents describe North America Automotive Projects and list several accused MCU devices incorporated into Ford automobiles through parts suppliers Denso and Delphi. See Exhibit I.
Land Rover automobiles Various MCUs (including possible FlexRay and CAN controllers)	No response	Document states that Jaguar Land Rover is using FJ's Jade GDC and is supported by FMA. See Exhibit S.
Canon digital cameras (incl. model EOS 10D) 32-Bit RISC MCU (incl. but not limited to MCU 29LV320TE-90 and MB39A102)	No response	Document lists Canon as one of EDG's Top Ten Worldwide Customers. See Exhibit R.
Olympus digital cameras MCU/microcontroller (incl. but not limited to MB89F538L)	No response	FJ does not deny that it places Olympus digital cameras with accused MCU devices into the stream of commerce.
Lexar Media Jump Drive memory device (Sweep Sensor - MBF310)	No response	FJ does not deny that the accused MCU devices are incorporated into these memory devices nor that the Jumpdrive incorporating the accused MCU devices is placed into the stream of commerce.
SanDisk Compact Flash memory device (32-Bit RISC microcontrollers)	No response	FJ does not deny that the accused MCU devices are incorporated into these memory devices and placed into the stream of commerce.

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# EXHIBIT “L”

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**TEKER TORRES & TEKER, P.C.**  
 SUITE 2A, 130 ASPINALL AVENUE  
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*Attorneys for Plaintiff  
 Nanya Technology Corp.*

**IN THE DISTRICT COURT OF GUAM**

**NANYA TECHNOLOGY CORP. and,  
 NANYA TECHNOLOGY CORP. U.S.A.,  
 Plaintiffs,**

**vs.**

**FUJITSU LIMITED, FUJITSU  
 MICROELECTRONICS AMERICA,  
 INC.,**

**Defendants.**

**CIVIL CASE NO. 1:06-CV-0025**

**DECLARATION OF MARTIN  
 PASCUAL**

I, Martin Pascual, hereby declare as follows:



1           1.     My name is Martin Pascual. I am over the age of 21 and am competent to make  
2 this declaration. All of the statements set forth herein are true and correct and are based on my  
3 personal knowledge.

4           2.     I represent Nanya Technology Corporation and Nanya Technology Corporation,  
5 U.S.A. ("Nanya") in the above-captioned cause.

6           3.     Attached as Exhibit E are true and correct copies of excerpts from the deposition  
7 transcript of Shigeru Kitano, taken on April 25, 2007.

8           4.     Attached as Exhibit K is a true and correct copy of a chart summarizing Nanya's  
9 evidence rebutting Fujitsu Limited's claims.

10          5.     Attached as Exhibit J is a true and correct copy of the February 10, 2003 article  
11 from Virtual Medical Worlds, by Leslie Versweyveld, entitled "Fujitsu and Source Medical  
12 showcase pen-based outpatient information system."  
13  
14

15  
16           I hereby declare under penalty of perjury that the foregoing is true and correct and, if  
17 called upon to testify, I would be competent to testify thereto.  
18

19  
20 Dated: June 25, 2007

21   
Martin Pascual